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ON SCENE

THE NATIONAL MARITIME SAR REVIEW

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United States Coast Guard

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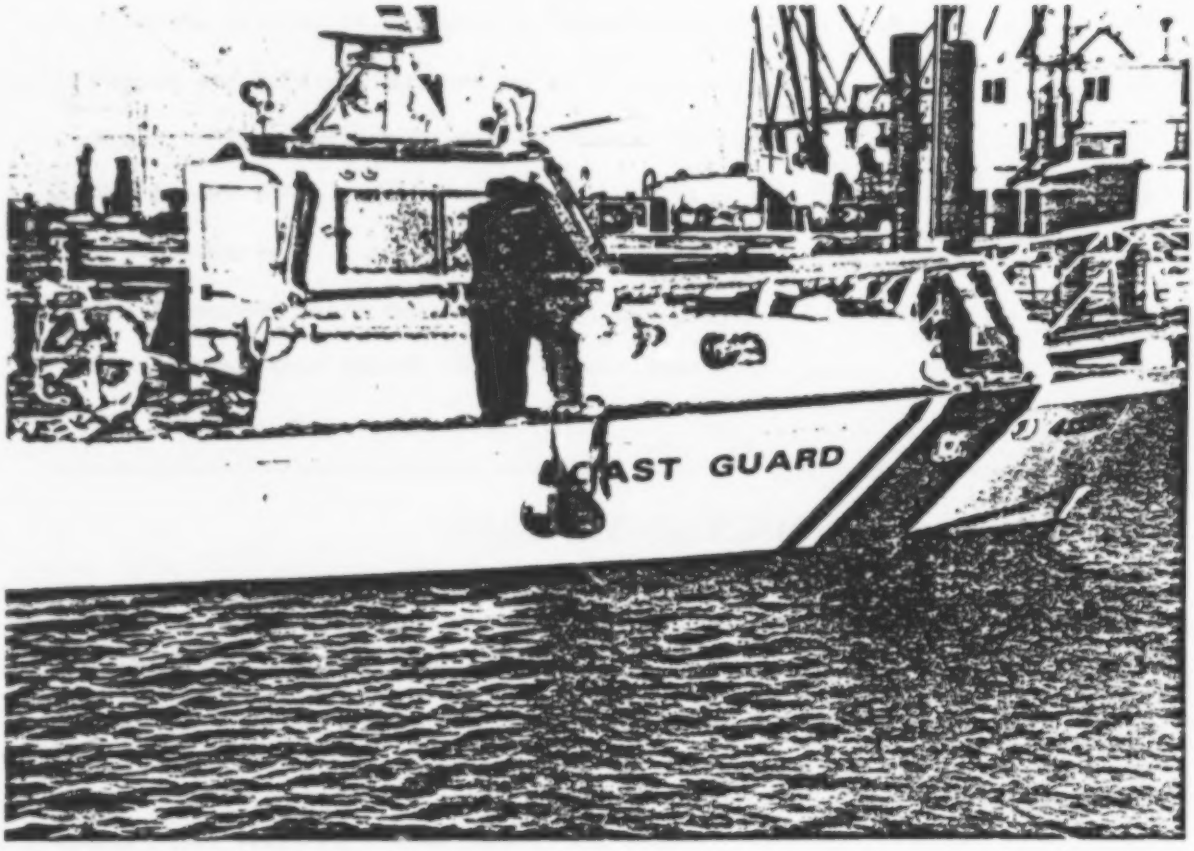

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ON SCENE
THE NATIONAL MARITIME SAR REVIEW

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ON SCENE is a quarterly, authorized, special interest publication, produced by the Operations Division for members of the U.S. Crast guard and the SAR community. Editorial content is not be considered as authority for official action nor as record material. Views and opinions expressed do not necessarily reflect those of the Department of Transportation or the U.S. Coast Guard.

About the Cover

Station Bellingham's 41331 returns home after a chilling nights work. Read more about their experience on page 10

Letters to the Editor

Dear ON SCENE,

In reading the article on dewatering pumps in the 4/85 issue, I was left in question on a few items. The manufacturer's information manual states that the pump is capable of pumping only 120 gallons per minute vice the 140 listed as the correct answer for question 2. Was this a typographical error or has there been testing to prove otherwise? COMOTINST M10470.10 does not contain information about the CG-P1 pump specifically. Perhaps this correction or explanation could be published so as to clear up the confusion that I have.

I do not understand question number 5. The CG-P1 pump is manually primed. Does it take 30 seconds to manually prime it with a 10 foot lift, or does it take 30 seconds (once primed) for the pump to show proper discharge and suction with this much lift?

MK3 JEFF W. DAVIS
Station Belle Isle

Change 2 to COMOTINST M10470.10A updated the Rescue and Survival Systems Manual to include information regarding the CG-P1 pump. This pump has become the standard dewatering pump for the Coast Guard.

A check with the manufacturer revealed your question about the gallons per minute (GPM) to be valid. When the pump was originally designed, it was capable of pumping 140 GPM at 3900 RPM. To prevent excess vibrations and extend engine life, the pump was derated to 3300 RPM. This, in turn, lowered the output capacity of the pump to 120 GPM.

Rest assured, the change will be made to the Rescue and Survival Systems Manual at the next revision!

In answer to your second question, the CG-P1 is manually primed to a 10 foot lift in approximately 30 seconds. Once properly primed and the engine started, pumping should begin almost immediately. In the event suction is lost while the pump is running, it can be regained by stroking the priming pump handle.

Dear ON SCENE,

Over the last year I've allowed your magazines to pile up in my "things to do today" pile. There were many very informative articles that I wanted to review and several I wanted to comment on. Well "today" has arrived so here I go, please accept may apologies for taking so long.

RHIL Launching and Recovering articles in issues 2/1985, 3/1985, and 4/1985. I found after reading these articles, that the launching techniques were similar to what we used for our four meter Avon on my last unit (CGC CATENARY-WYTL 65606) with one major exception. I felt that placing personnel in the boat during hoisting and lowering was too dangerous to risk, especially since no monkey lines are available. We would lower the boat and slack the fall far beyond the rise and fall of the boat riding the seas. With the major weight now on the painter the bow and stern lines would be used to hold the boat alongside. The engineer entered the boat and started the engine and then would release the fall. The coxswain would then enter. The same procedure was used for recovery. After riding alongside on the sea painter the bow and stern lines were manned to hold the boat alongside the coxswain would disembark and the engineer would secure the engine and hook up the fall.

Once the engineer was back aboard the tug, hoisting would being. If these operations must be done with people on board the RHIL, then perhaps modification of the davit head cold be made to accommodate a fore-and-aft monkey line. Although it was easy for us to put people aboard the RHIL due to the low freeboard of the WYTL at the davit location, other units possibly could utilize a jacob's ladder rigged before launching at the point where the RHIL rides. One other item is that we found that the advertised weight of our RHIL did not include the weight of the water held as ballast in the double hull and should be included when calculating the lifting weight of the boat. The manufacturerprovided us with the additional weight information when we called.

Both the 2/1985 and 3/1985 issues talked of marker buoys as being highly endorsed for cases involving searches, especially PIW Cases. One problem with that is, marker buoys are not on the boat outfit for the 44MLB or 41UTB and as both type manuals say "Since a fundamental purpose of the manual is to standardize for the Coast Guard the exact type and specific location of all the equipment carried onboard the 41'UTB (or 44'MLB), there is no command prerogative regarding the type or location of equipment carried on the boat.". Consequently, the marker bunys should be left ashore and taken aboard as needed or, added to the boat outfit list, the latter being my recommendation.

Perhaps in your BOATALT Blurb section you could pass on whatever happened to the proposed BOATALT for mounting a shotgun rack on the 41'UTB. As I remember a COMDTNOTE was issued a few years ago saying that a BOATALT was forthcoming and gave the company's name and amount the racks cost. Some units purchased and installed the racks only to later find out that no BOATALT was issued. What's the story?

I have found CDR (Doc) STEINMAN'S articles to be very interesting and feel they are very important. It is for that reason I feel a little guilty for criticizing a very small part of his outstanding article on "Bridge Jumpers" in the 4/1985 issue. One sentence said "The boat coxswain should not leave the helm to assist.". Several years back a problem existed with coxswains being instructed that they shall never leave their boat and that sometimes got carried to "never leave the helm". COMDINST 16100.2A was issued and

helped clarify this misnomer. I have experienced myself as a coxswain, cases where my crew members could not easily get someone aboard themselves. Rather than causing strain and possible further trauma to the victim, I left the helm to assist. A coxswain must always be aware of his surroundings and he must be allowed to use his judgment to decide whether to leave the helm or not. When I served on a District Inspection Staff, I witnessed coxswains that acted as though they were handcuffed to the helm and affected their ability to perform. I feel all Units and coxswains should review COMDTINST 16100.2A to refresh themselves on the Commandant's policy on this matter and include the Instruction in the unit training schedule.

J.R. POND
OinC, Sta Belle Isle

Editor's Note: As you can tell from the articles run in recent issues of ON SCENE, there appears to be more than one correct way of launching the shipboard RHI. The main thing to keep in mind during the evolution, regardless of which method you choose, is the safety of all concerned.

Concerning the latest information on those gun racks, check BOATALT 41 UTB (A)-X-64 dated 28 March 84 and ammendment one, dated 9 Jan 85 .

"DOC" Steinman's article was a reprint from several years back, and as you know, policies have a way of changing with the times. We agree with you that a review of COMDTINST 16100.2A is in order. As in most situations, common sense and prudent seamanship should prevail.

MAILING LIST REQUESTS

Every week we get many requests to be added to the distribution list for ON SCENE magazine. The majority of these requests are from individual Auxiliarists. While we appreciate your interest in the magazine, in light of the current austere budget situation, we are attempting to limit our distribution to organizations rather than individuals in order to keep our costs at a minimum. ON SCENE is distributed to certain officers within the Auxiliary based upon their functional responsibilities. Recipients are reminded that the intent is for the publication to be shared with other members once you have finished with it.

Editor's note: Hats off to BMC Sam Lucas, a long time SAR professional who retired from the Coast Guard 28 February 1986. His last assignment as Officer in Charge, Station Pensacola reflected a SAR career of uncommon valor and sacrifice that others may live. Fair winds, following seas, and may a PFD always be close at hand.

HYPOTHERMIA

DON'T GIVE UP

by: LT Bruce Viekman

First District OPCEN

Can a 10 year old boy still be alive after being trapped underneath the ice for almost 2 hours? Most people would say it is impossible, but it happened!

Lake Tashmoo is a tidal lake on Martha's Vineyard Island off the coast of Massachusetts. On Saturday, December 21, 1985 Jeffrey Goodale chased his dog across the lake, and fell through the ice at about 11:15. The air temperature was 28 degrees, and the 40 degree water was covered by an inch of soft ice. His brother ran home and advised his parents, who called the local police. Divers and rescue vehicles from all 5 towns on the Vineyard arrived at the lake shortly afterward, and tried to locate the boy without success.

At Noon, Coast Guard Group Woods Hole was notified of the situation. Station Menemsha sent a vehicle equipped with a radio to the scene, and Air Station Cape Cod launched an HH-3F with a corpsman within 20 minutes of the initial notification. Soon after the Coast Guard arrived on scene, the State and Local agencies had given up on finding Jeffrey alive. They assumed nobody could live that long without air.

Several cases have been in the press recently where children had been found alive after long periods without air. In one case in Ohio, a child had been recovered after 45 minutes underwater, still with a pulse. He had died several days later in the hospital. In another case on Lake Michigan, another boy was pulled from the water after 6 minutes, and recovered fully. The fact is that no one really knows how long a person can live under water.

The Aircraft Commander of the H-3 was aware of these cases, and prompted the police boats to break up the ice. Using the rotor downwash, the helo pushed the ice chunks aside, and started a second search effort, which located the boy at 12:59 pm. Jeffrey had been underwater for about an hour and 45 minutes, but the paramedics on scene found a pulse, and the boy had reactive eye pupils when he came out of the water. When he arrived at Marthas Vineyard Hospital, they did not have a thermometer which would read low enough to record his body temperature.

After warming him with blood transfusions, the boy was loaded into the H-3 to be transported to Massachusetts General Hospital. By this time, Jeffrey's temperature was up to 78 degrees, but his heart rate was still erratic. He was placed on a heart-lung machine at Mass General to regulate his body temperature, but he died Sunday evening without regaining consciousness.

Why did this boy and others survive for so long without air? There was nothing exceptional about their dress -

all were normal winter clothes. None of the boys had any source of air while underwater.

The one thing they did all have were natural instincts. All these cases are attributable to the "Mammalian Diving Reflex" or "Cold Water Drowning". This phenomenon is little understood by doctors, and even less understood by the general public. When a person is suddenly immersed in cold water, it is believed that the body shuts down all circulation except to the heart, lungs, and brain. The cold water slows the body's metabolism, so that very little oxygen is used. People are able to live for much longer than they would without either the reflex or the slower metabolism. There is, of course, a limit on how long people can live in this state, but nobody knows what that limit is.

What does this mean operationally? We can't assume that somebody is dead from hypothermia unless a hospital has warmed them up and there is no sign of life. After all, somebody lived after 6 minutes of immersion, one came close after 45 minutes, and this boy still had a pulse after 105 minutes! Secondly, don't be surprised if the Coast Guard people on scene are the only ones know about hypothermia. We have more occasion to work with hypothermia cases than most other agencies. In this case, the Coast Guard was the only agency who had hope of finding Jeffrey Goodale alive after almost two hours in the water. As one of his doctors put it, "It is a lot better to err on the side of trying to rescue someone in his condition."

1985 AFRAS Gold Medal Award Winner

by: LTJG P.M. Keane, G-OSR-1

Background. In 1975 it was recognized by American businessmen and naval officers who had worked in Europe or who had sailed the oceans of the world, that there was a need for some non-governmental organization to lend assistance to the voluntary life-saving services. Fund-raising was a perennial problem, for instance, and achieving uniformity in operations and equipment was a continuing concern. To address these and other problems of a similar nature the Association for Rescue at Sea (AFRAS) was formed.

The purpose of the Association is to foster traditional maritime search and rescue values through suitable recognition, to facilitate international cooperation in search and rescue, and to sustain voluntary search and rescue organizations through dissemination of information and provision of financial support.

In their efforts to provide suitable

recognition, AFRAS has established their GOLD MEDAL award. Nominations are accepted from stations throughout the Coast Guard. Deciding which is the most deserving nominee is very difficult. The 1985 award winner was SN Kenneth A. HARTT for his rescue of survivors of a severe boating accident in the Corpus Christi, TX shipping channel. The account of SN HARTT's rescue, taken from his Personal Award Recommendation, follows:

At approximately 1521 on 21 September 1984, Station Port Aransas received a call from the charter boat DOLPHIN EXPRESS reporting an abandoned 20 foot pleasure craft. The abandoned boat was reported capsized and drifting, in the vicinity of buoy 7 of the Corpus Christi ship channel. Petty Officer Patricia LAUNIUS, the station OOD, sensing a potential catastrophe, requested that the DOLPHIN EXPRESS investigate the situation. The DOLPHIN EXPRESS then relayed information that led petty officer LAUNIUS to believe that an unknown number of people were possibly in distress. She then immediately sounded the "EMERGENCY ALARM", and launched the utility boat CG 41390.

At 1528R, the utility boat CG 41390 departed Station Port Aransas. The crew consisted of:

SN Kenneth HARTT-	Coxswain
MK3 Joseph ADAMS-	Engineer
MK3 Craig MATHHUES	Engineer-in-training
SN Todd JENSEN-	Crewman
SA Greg SELEEN-	Crewman

At 1540R, CG 41390 rendezvoused with the charter boat DOLPHIN EXPRESS just inside the tip of the Port Aransas jetties. Just beyond the jetties, SN HARTT observed waves breaking in excess of 12 to 14 feet. The operational limit of the 41 foot utility boat is 8 feet; SN HARTT, in concert with Petty Officer LAUNIUS, decided that a "calculated risk" was appropriate as lives were definitely in danger. SN HARTT and his crew then skillfully crossed the bar, exceeding the operational limits of their vessel.

At 1550R, CG 41390 commenced a search of the waters outside the jetties. SN HARTT was still confronted with 10-12 foot seas and heavy rolls. The on scene conditions demanded his constant attention, and repeatedly challenged SN HARTT and his crew. It was at this time, through Petty Officer LAUNIUS' "detective work", that at least two people were confirmed missing.

At 1620R, unidentified off-shore supply vessel reported several floating objects over VHF-FM. CG 41390 immediately diverted to the reported position. At 1625R, five people, huddled together and clinging to three lifejackets, were located by CG 41390. SN HARTT battled the high winds and heavy seas as he skillfully positioned the CG 41390 for the recovery. Several times during the recovery, the UTB experienced very heavy rolls. However, all five people were successfully recovered. The crewmen of the CG 41390 immediately began administering first aid to two of the survivors. One of the survivors had a severe laceration to the leg and had already lost a considerable amount of blood. Another survivor had possible neck injuries. The other survivors were treated for possible exposure after spending two and one half hours in the water.

After recovering all survivors, SN HARTT then attempted to establish communications with Coast Guard HH-52A helicopter, CGNR 1439. SN HARTT intended to MEDEVAC the injured survivors; however he was unable to establish communications with the helicopter. Due to the condition of the survivors, SN HARTT again decided to cross the bar. SN HARTT was now confronted with a following sea, making

the crossing more treacherous. He skillfully maneuvered his vessel back across the bar which had earlier capsized the 20 foot pleasure craft. During the crossing, CG41390 experienced a heavy "broach-roll" effect that tested the seamanship skills of SN HARTT and his crew. At 1636R, CG 41390 transferred the injured personnel to waiting ambulances at Station Port Aransas.

SN HARTT assumed a great deal of responsibility when he elected to cross the bar. He was aware that he might exceed the operational limits of his boat. Prior to crossing the bar, SN HARTT advised the station OOD of the on scene weather and his intentions. In the interest of saving lives, and after discussing the situation with an experienced OOD, he elected to continue. Although a relatively new coxwain, SN HARTT displayed the boat handling and seamanship of a seasoned veteran throughout his rescue. He additionally displayed a great deal of composure and courage under extremely adverse conditions.

The presentation ceremony for the GOLD MEDAL will be held later this year at an as yet, undetermined place and time. Included with the GOLD MEDAL will be a cash award of $500.00.

There were three other nominees from the Coast Guard. Even though they were not selected, we would, nevertheless, like to recognize them and their selfless acts by including their names below:

SN Dennis M. TOBIN of Station Scituate, Massachusetts

SN Michael A. GUNSEN of Station Rockaway, New York

SN Geoffrey A. MORRIS of Station Cape Disappointment, Washington

"THE PROFESSIONALS"

SAR BOAT DESK

by: LT. Guy Sorensen, G-OSR-1

41' UTB OPERATOR'S HANDBOOK:

The 41' Operator's Handbook, COMDTINST M16114.2A, has been revised and recently gone to press. This publication replaces the 41' Type Manual making the older edition obsolete. The new version has, in addition to a new name, revised wording for easier reading and understanding, new text and figures to describe equipment changes and alterations, some changes to the outfit list and stowage plan, and the inclusion of a comprehensive inspection check list. The operational capabilities, limitations, and emergency procedures are clearly stipulated, with the fittings, outfit list, and physical

characteristics of the boat pictured and described in detail. A comprehensive material inspection checklist including required boat outfit is also provided.

30' SRB UPDATE:

As you know, the 30' Surf Rescue Boat (SRB) has a high speed handling problem. In many ways, the phenomenon can be likened to a fixed wing airplane stall - the bow loses lift and the running trim is gradually lost over a 2 - 4 second period. To recap the problem, the boats high speed instability occurred in two distinct phases; first, there was a gradual loss of running trim with the boat progressively enveloped in spray from the bow. Then, the boat would heel violently to port and simultaneously skew to starboard with solid water flushing through the cockpit. This was by far, the most dangerous aspect of the instability since the crew could easily be flushed overboard and/or suffer traumatic bodily injury. Backing off on the throttle was the only measure you could take to terminate the dynamic instability condition.

Naval Sea Systems, Norfolk, VA (NAV-SEA) tested CG30601 and determined that the bow shape of the SRB allows a low pressure area to form below the waterline. This causes a loss of running trim which induces dynamic high speed instability. Consequently, a bow wedge modification was designed and installed on CG30602, an SRB assigned to the National Motor Life Boat School (NMLBS). The wedge modification consists of three strake type rails built into the port and starboard bow section extending from the chine diagonally aft and down towards the keel at approximately a fifteen degree angle. The purpose of these wedges is to ventilate the low pressure area of the bow, breaking the downward pull.

With the new wedges installed, the boat still lost running trim, but it would no longer heel to port and skew to starboard. Additionally, the coxswain was able to maneuver out of the low trim condition and regain control at full throttle by simply moving the rudder a few degrees, which was not possible prior to the installation of the wedges. Operational testing of the CG30602 at NMLBS reveals the boat has lost a small amount of speed with the installation of the wedges and rides with a slightly increased bow down angle.

The wedges appear to be a definite move in the right direction. The most dangerous aspect of the instability characteristic was not evidenced with the wedges installed, and the coxswain is able to regain control of the negative trim condition merely by use of the rudder without having to reduce throttle. Operational evaluation will continue at NMLBS while fine tuning for the wedge installation is conducted at NAV-SEA. When these steps are completed and evaluated, we hope to issue a BOAT-ALT.

In the interim, training will continue at the NMLBS for all coxswains from SRB units who attend the regular three week Heavy Weather Coxswain course. They will be intentionally taught the techniques to induce dynamic instability as well as how to one, avoid, and two, if unable to avoid, how to correct the handling problem. While an engineering solution to the problem is our primary objective, the boat is definately safe to operate if the coxswain is properly trained.

30' SRB OPERATOR'S HANDBOOK:

I thank everyone for the input made on the draft copy of the SRB Operator's Handbook. Your comments and suggestions are all being reviewed. Work is well underway putting this publication together, with a tenative "delivery" date later this year.

ORDERING PUBLICATIONS:

Please take the time to check the ordering instructions in the DIRECTIVES, PUBLICATIONS, REPORTS INDEX, COMDTNOTE 5600 when requesting publications. "Stock Point" is the address to send your CG - 4428 to. Many have been sending the CG-4428's directly to G-OSR-1 for publications instead of the appropriate stock point. Since our office is too small to stock publications, all we can do is forward your request to the appropriate stocking point. This causes delays in processing your order which could otherwise be avoided.

Rescue Services Directory for California Waterways

by: Mr. Carlton Moore

CALIFORNIA Department of Boating and Waterways

As a result of a joint Coast Guard and state of California effort, federal, state, and local agencies involved with maritime rescues have a new tool—the Rescue Services Directory for California Waterways. It enhances individual rescue efforts, reduces response times, and helps coordinate multi-juridictional SAR cases.

In June of 1985, the California Department of Boating and Waterways and Coast Guard Group San Francisco teamed up to produce this widely distributed directory. It lists all agencies within California's 58 counties that have marine rescue capabilities.

California has approximately 3500 miles of tidal shoreline and over 2000 square miles of inland waters. It's recreational boating fleet exceeds 70,000 craft and boating occurs actively on a year-round basis. The state's varied boating environments include high alpine lakes, seasonal reservoirs, swift mountain rivers, an expansive delta complex, and coastal ocean boating.

Each environment calls for different rescue techniques, and in many cases, specialized equipment. SAR efforts in the marine sector do not necessarily involve water craft in every instance. Rescue agencies and emergency services coordinators respond to other types of accidents where aircraft or automobiles enter the water, or where floods or levee failures inundate inhabited areas.

The Rescue Services Directory allows each agency to quickly identify rescue assets of neighboring counties at

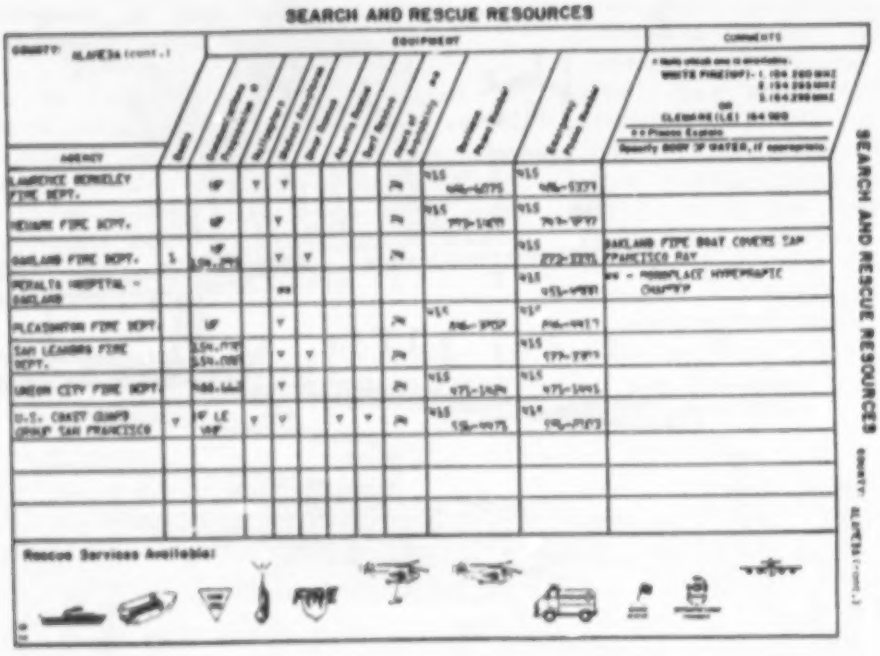
The following are exerpts from the directory for Alameda County, showing examples of the maps and the quick reference charts showing availability of rescue resources:

SEARCH AND RESCUE RESOURCES

AGENCY	Radio	Communications Coordination	Communications	Medical Ambulance	Boat Rescue	Aquatic Rescue	Boat Pumps	Hose of Fire Capacity	Rescue Boats Number	Rescue Boats Radio	COMMENTS
ALAMEDA COUNTY SHERIFF'S DEPT.	L	HP LE			Y			2%	915 573-1075	915 573-1067	
ALAMEDA FIRE DEPT.		HP		Y				2%	915 [illegible]	915 [illegible]	
ALAMEDA POLICE DEPT.	Y	FL, [illegible] AM, [illegible]							915 [illegible]	915 [illegible]	
ALBANY FIRE DEPT.		HP [illegible]		Y					915 525-7101	915 525-7101	
BERKELEY FIRE DEPT.		HP [illegible]		Y					915 [illegible]	915 [illegible]	
EAST BAY REG. PARKS		[illegible]	L							915 881-1837	
EDEN CONSOLIDATED FIRE PROTECTION DIST.		HP [illegible]		Y						915 [illegible]	
EDEN HOSPITAL - CASTRO VALLEY				00						915 537-1234	00 — REPLACE HYPERBARIC CHAMBER
EMERYVILLE FIRE DEPARTMENT		HP LE		Y					915 [illegible]	915 [illegible]	
FREMONT FIRE DEPT.		HP [illegible]		Y						915 [illegible]	
HAYWARD FIRE DEPT.		HP [illegible]								915 [illegible]	

Rescue Services Available:

SEARCH AND RESCUE RESOURCES COUNTY: ALAMEDA



SEARCH AND RESCUE RESOURCES

COUNTY: ALAMEDA (cont.)

AGENCY	Boats	Communications Frequencies	Helicopters	Medical Facilities	Dive Teams	Aquatic Rescue	Surf Rescue	Hours of Availability	Business Phone Number	Emergency Phone Number	COMMENTS
LAWRENCE BERKELEY FIRE DEPT.		UF						24	415 [illegible]	415 [illegible]	
NEWARK FIRE DEPT.		UF						24	415 [illegible]	415 [illegible]	
OAKLAND FIRE DEPT.	1	UF [illegible]						24		415 [illegible]	OAKLAND FIRE BOAT COVERS SAN FRANCISCO BAY
PERALTA HOSPITAL - OAKLAND				**						415 [illegible]	** - HOSPITAL HYPERBARIC CHAMBER
PLEASANTON FIRE DEPT.		UF						24	415 [illegible]	415 [illegible]	
SAN LEANDRO FIRE DEPT.		[illegible]						24		415 [illegible]	
UNION CITY FIRE DEPT.		[illegible]						24	415 [illegible]	415 [illegible]	
U.S. COAST GUARD GROUP SAN FRANCISCO		UF LE VHF						24	415 [illegible]	415 [illegible]	

Rescue Services Available:

SEARCH AND RESCUE RESOURCES COUNTY: ALAMEDA (cont.)

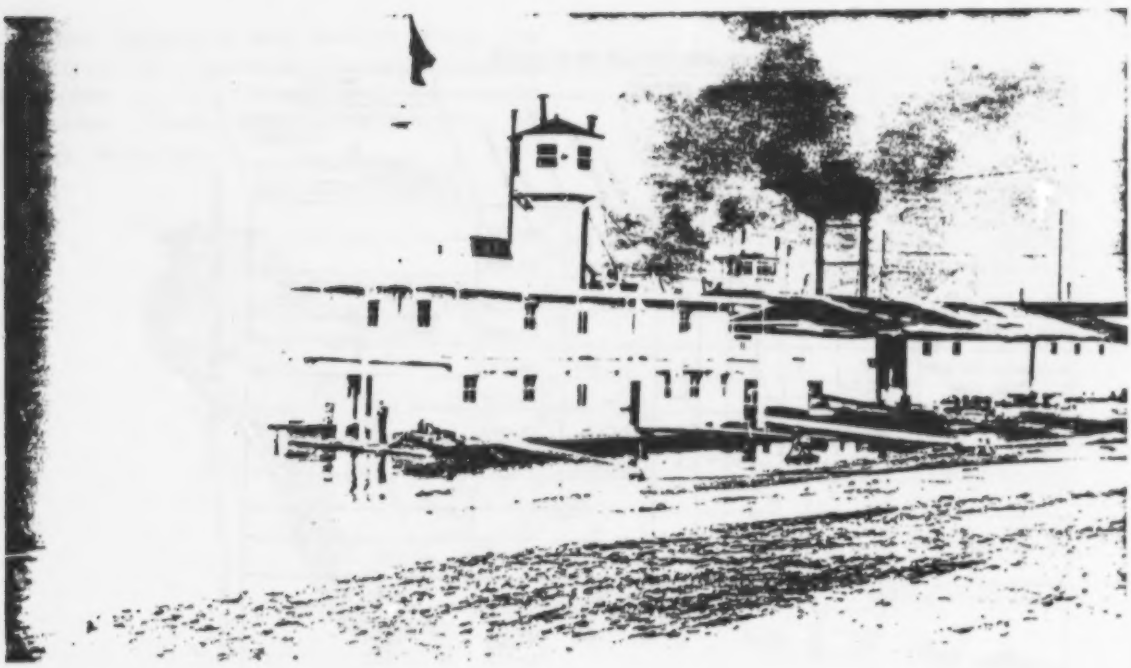
all three levels of government. Conversely, the Coast Guard may use the directory in locating critical local assets for special need, such as cliff rescue, dive rescue, hyperbolic chambers, and vertical lift capabilities in areas far from Coast Guard facilities.

Of special importance is the listing of radio frequencies for each agency. Almost anyone who has worked a multi-agency case involving radio communications has been frustrated with frequency incompatability problems. The directory will allow for planning of communications nets to accommodate local agencies.

As an aid to responding agencies from an outside jurisdiction, the directory provides county maps with each major waterway highlighted. A corresponding grid is provided for the particular county. It lists boats, communications frequencies, availability of helicopters or fixed wing aircraft, EMT/paramedic resources, dive rescue, aquatic rescue and surf rescue equipment. Emergency telephone numbers are included in the grid for each agency.

The primary goal of the Rescue Services Directory is to provide information to those who respond to waterborne emergencies. Through a better understanding of nearby assets, rescue coordinators can more effectively tailor rescue efforts to meet any unique conditions that might arise. This translates to both dollars and lives saved.

Editor's Note: Our complements to the California OBW and Group San Francisco for this outstanding effort. This is the type of planning and cooperative effort that will save time, frustration and lives in the long run. Anyone else out there have a similar arrangement or ways to improve upon this one? Let's hear from you.



Here's an interesting little piece of nostalgia that came across the editor's desk. Can any of you "Old Guard" types out there identify it and tell where they were used?

Deepfreeze Distress

by: BM1 R.C. Rogala

CG Station Bellingham

On Tuesday, November 26, 1985, UTB 41381 left Station Bellingham, located in the "fourth corner " of the U.S., to conduct a search exercise with the City of Bellingham fireboat in Bellingham Bay. As can be expected for this time of the year, the weather was poor. Snow had been threatening to fall for several hours. The wind was out of the Northeast at about 20 knots, not particularly unusual. At about 1400 hours, Station Bellingham received a call for assistance from a 26 foot gillnetter. The distressed vessel's reported position was only 6 miles from where the exercise was taking place.

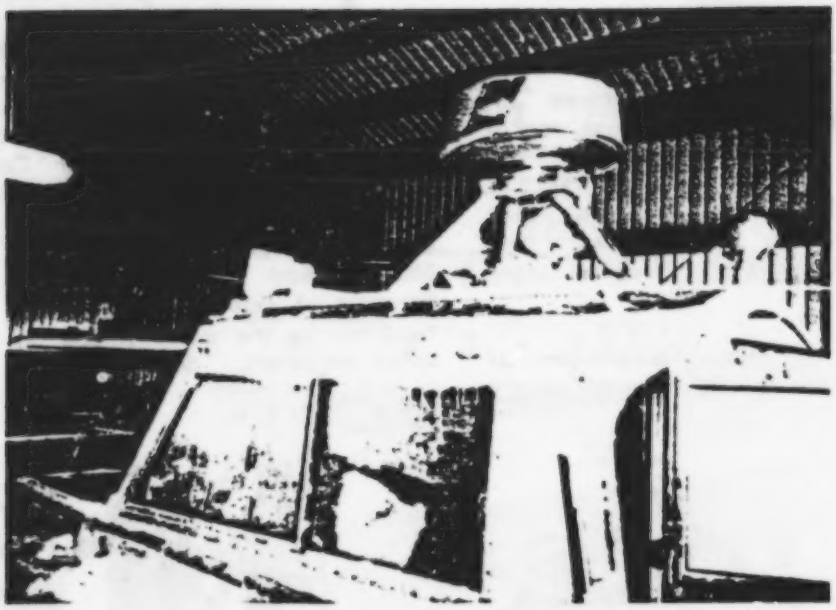
The 41381 broke from training and headed for the fishing vessel, while the fireboat made it's way back to it's

moorings in the harbor. Visibility had decreased to less than a quarter mile, making the going slow.

At 1545 the 41381 arrived on scene. The distressed vessel was nearly 4 miles from it's reported position. The boat coxwain, BM3 Dave WORTHLEY, reported visibility at zero, a 40 knot northeast wind and heavy seas. The 381 was experiencing severe icing conditions.

The Watcom County Department of Emergency Services issued a severe winter storm warning for blizzard and white-out conditions with steadily increasing winds. The 381 took the fishing vessel in tow and headed for a small cove about 4 miles away. The station O in C, Group Seattle and Rescue Coordination Center Controllers were deeply concerned for the crew. Ten minute ops and position reports were being given by the UTB. As the 381 crossed the lower end of the Straight of Georgia, the storm's intensity grew to the point where no headway could be made. Seas increased to 6 to

Icing on Station Bellingham's 41 footer the day after riding out a cold winters storm. Note the low waterline. The ice added considerable weight to the boat, making it slow to respond.



Icing rendered the most of the electronics useless. The radar maintained a good image, but the loran, radio, horn and loudhailer were next to useless.

8 feet. Ice had built up on the exterior of the UTB so badly that the windows were blocked BM3 WORTHLEY felt it was too hazardous to have any of the crew go out on deck to remove some of the ice. He kept one eye on the radar and one eye on the charts SN Jim GOULD, a coxwain-in-training, did the best he could to stay on a steady course.

The Thirteenth District Rescue Coordination Center dispatched CGC Point Glass, which was 8-0 in Anacortes, 15 miles to the south. The OinC, Group, and District Controllers felt it was a necessary precaution .

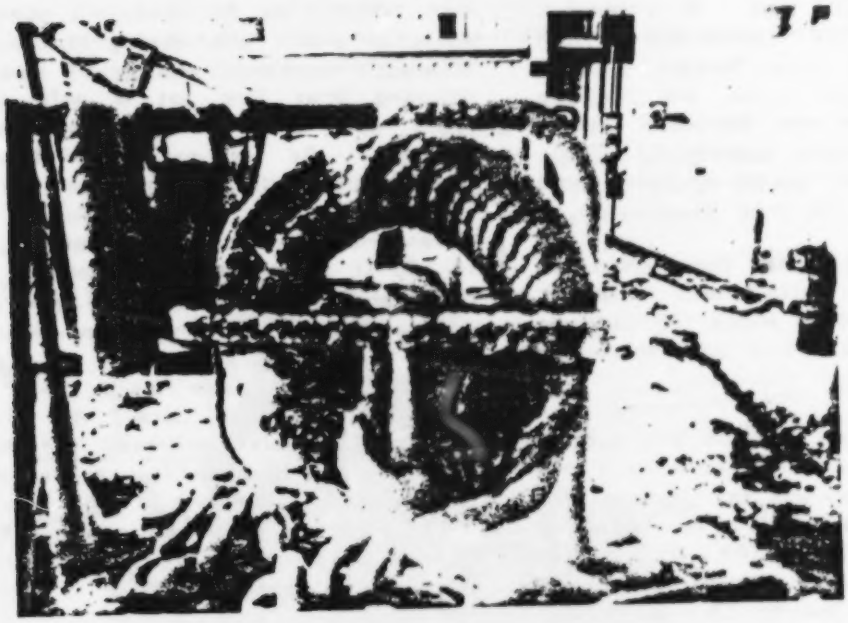
Four and a half intense hours later, the 41381 reported that they had gotten into somewhat of a lee near Lummi Island, and would be approaching the cove shortly. The storm was ravaging inland. Interstate highway 5, the major north-south route along the west coast, was closed just north of Bellingham due to white-out conditions. Contrary to popular belief, the northwest does not experience severe winter storms. This was the worst storm in 25 years. The "fourth corner" was pretty much paralyzed.

The 381 finally made it into the cove safely. The CGC Point Glass was turned back and the UTB tied up to wait out the storm. Temperatures dipped to 25 degrees below zero with 50-60 knot winds and heavy snow throughout the night. An attempt was made by the station to send a 4-wheel drive vehicle to meet the boat. The vehicle had to turn back because of white-out conditions and deep drifts of snow on the roadways. The crew spent a long, cold night, but at least they were safe.

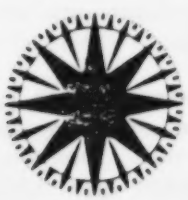
At 0800 the next morning, the 41381 returned to Station Bellingham. The snow had stopped, but the cold strong wind persisted. The awesome sight of the iced-over Coast Guard boat was a relief for sore eyes at the

Station. Needless to say, the crew, BM3 Dave WORTHLEY,SN Jim GOULD, FN Steve McGILTON, SN Mike RUSSELL and SN J.J. LAWRENCE were ready to come home. SN GOULD suffered some minor frostbite to his toes. Everyone else was cold and hungry, but well.

The next day, the Thirteenth District Commander sent a message to Station Bellingham, commending the performance of the crew, "...Despite winds gusting to 40 knots, zero visibility in blowing snow and severe icing, you safely and professionally completed a demanding mission...Bravo Zulu. Parker sends"



Lifering on the starboard side of CG 41381 shrouded in ice after riding out an unusual blizzard in the Straight of Georgia.



AIRPLANE DITCHES IN ICY LAKE MICHEGAN

Air Station Chicago Helicopter Rescues Survivors

by: LTJG Larry Goeb, USCG

Two men were rescued by a Coast Guard Air Station Chicago helicopter Thursday morning December 12th after their single engine airplane crash-landed in the icy waters of Lake Michigan off Chicago's North Shore.

The pilot of the Piper Malibu, Michael Simonelli, 39, of Geneva, Illinois, and his passenger Rich Henderson, 27, of Carol Stream, Illinois, were on a flight from the Dupage County Airport in west suburban Chicago to the Detroit suburb of Troy, Michigan, in their rented airplane when problems began.

"We were at 9,000 feet when we started hearing a noise," said passenger Henderson. "Within about 30 seconds the noise got real bad and then the engine just quit."

Simonelli began a glide and turned the aircraft toward the shoreline. He radioed his emergency to Chicago Air Traffic Control saying, "I'm not going to make it to shore." The Air Traffic Control authorities in turn contacted Coast Guard Air Station Chicago located at NAS Glenview, IL.

The Air Station Search and Rescue Alarm sounded and Coast Guard personnel sprang into action. The announcement, "Get the ready 'helo' on the line! - Aircraft going down five miles east of Evanston!" meant this was no drill.

The "ready" flight crew, Pilot Lieutenant Rick YATTO, Co-Pilot Lieutenant (junior grade) Larry GOEB, and Flight Mechanic Aviation Machinists Mate Third Class Glenn ANTHONY ran for their flight gear and jumped aboard their HH52A helicopter realizing that speed could make all the difference on this mission.

Henderson said he and Simonelli stayed calm during the landing. "He was telling me to keep my seat belt fastened and I was asking if the thing floated," Henderson said. "I just kept thinking that I've got a wife and a little girl, and I've got to make it through. As we got lower I braced myself and made sure my seat belt was real tight. We skipped two or three times and then stopped. I felt my face to see if there was any blood or anything and then I pulled the emergency door and waited for the Coast Guard."

As "Coast Guard Rescue 1459" flew toward the crash site, Air Traffic Control Officials confirmed the downed aircraft's position as "five miles east of the Evanston shoreline." The pilot, LT YATTO continued on an easterly course toward a circling civil jet that was marking the crash site.

Co-Pilot LTJG GOEB was the first to spot the downed plane. LT YATTO quickly maneuvered his rescue helicopter in for a closer look and could see the survivors waving from the opened door of the floating and relatively undamaged airplane.

"Rig for a basket hoist!" came the command from the pilot to the flight mechanic and hoist operator AO3 ANTHONY. "Rigged and ready sir!" responded ANTHONY. As LT YATTO kept the helicopter 15 feet above the

plane, AO3 ANTHONY lowered the rescue basket and hoisted each of the men from the wing of their flooding airplane to the safety of the hovering Coast Guard Helicopter. The plane sank minutes later in 60 feet of water.

As the helicopter returned to NAS Glenview, medical technicians were already standing by at the airfield to administer first-aid to the survivors. "Victims appear to be wet and cold and slightly shaken" came the call from "Rescue 1459".

Upon landing, Navy Corpsmen checked the physical condition of the two men while Coast Guard personnel provided them with warm, dry clothing. Simonelli and Henderson were then transported to the NAS Branch Clinic where they were further examined and released.

While being questioned later by local news reporters, the happy survivors expressed their thanks to all involved and said they couldn't have asked for better assistance. "They were great!", said rescued pilot Simonelli.

From takeoff to landing, the rescue lasted only 18 minutes for the Air Station Chicago crew. A short, but extremely successful life-saving mission had been completed. When asked about his feelings of the rescue, Petty Officer ANTHONY summed it all up... "When you talk about job satisfaction - this is it!"

Editor's note: Hats off to the air crew of CG Rescue 1459—This is another fine example of a very timely response by our fine, professional SAR personnel

Rescued pilot receives assistance from USCG and USN medical technicians following rescue.

top: Co-pilot Ltjg Larry Goeb, left to right: USCG AM3 Walt Madsen, USN HM2 Rod Mantle, USCG AO3 Howard Keech, and rescued pilot Michael Simonelli.

RESCUE AND SURVIVAL SYSTEMS NOTES

by: CWO Steve Seybold, G-OSR-1

BOAT CREW PROTECTIVE CLOTHING

Forthcoming will be a Commandant Notice intended as an aid to personnel responsible for the identification, procurement and issue of organizational clothing for boat crew and boarding party members.

The Notice will recommend those items believed to be the best currently available. The list consists of three major divisions:

(1) items recommended for all boat crew and boarding party members;

(2) items recommended for crew members who operate in cold climates;

(3) optional items for issue at the discretion of commanding officers and officers-in-charge.

Where feasible, supply information data has been included. Since this type of information is subject to continual change, I recommend you validate the information through current stock lists prior to ordering any of the recommended items.

The following is a condensed listing of the equipment recommended for issue:

(1) to all crew members:

PARACHUTE BAG
GOGGLES
HELMET
SHOES
PERSONAL MARKER LIGHT
GLOVES
RAIN GEAR

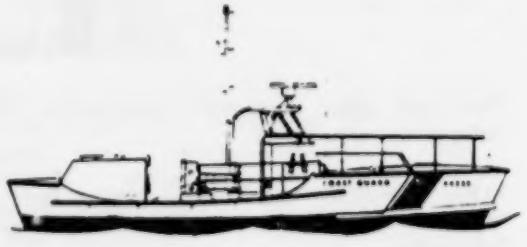
(2) to crew members operating in cold climates

SOCKS
BOOTS
GLOVE INSERTS
THERMAL UNDERWEAR
ANTI-EXPOSURE COVERALLS

(3) optional items

SUNGLASSES
KNIFE
WET SUIT

The list will be maintained by Commandant (G-OSR-1) and updated periodically. Should you come across items which you believe should be added, deleted or changed, please forward them through your chain-of-command. Your inputs are of the greatest value since it is YOU who actually uses the equipment!



USING LORAN EFFECTIVELY IN A SAR SEARCH PATTERN

by: B. Auchy, Rear Commodore,(Northern Area)

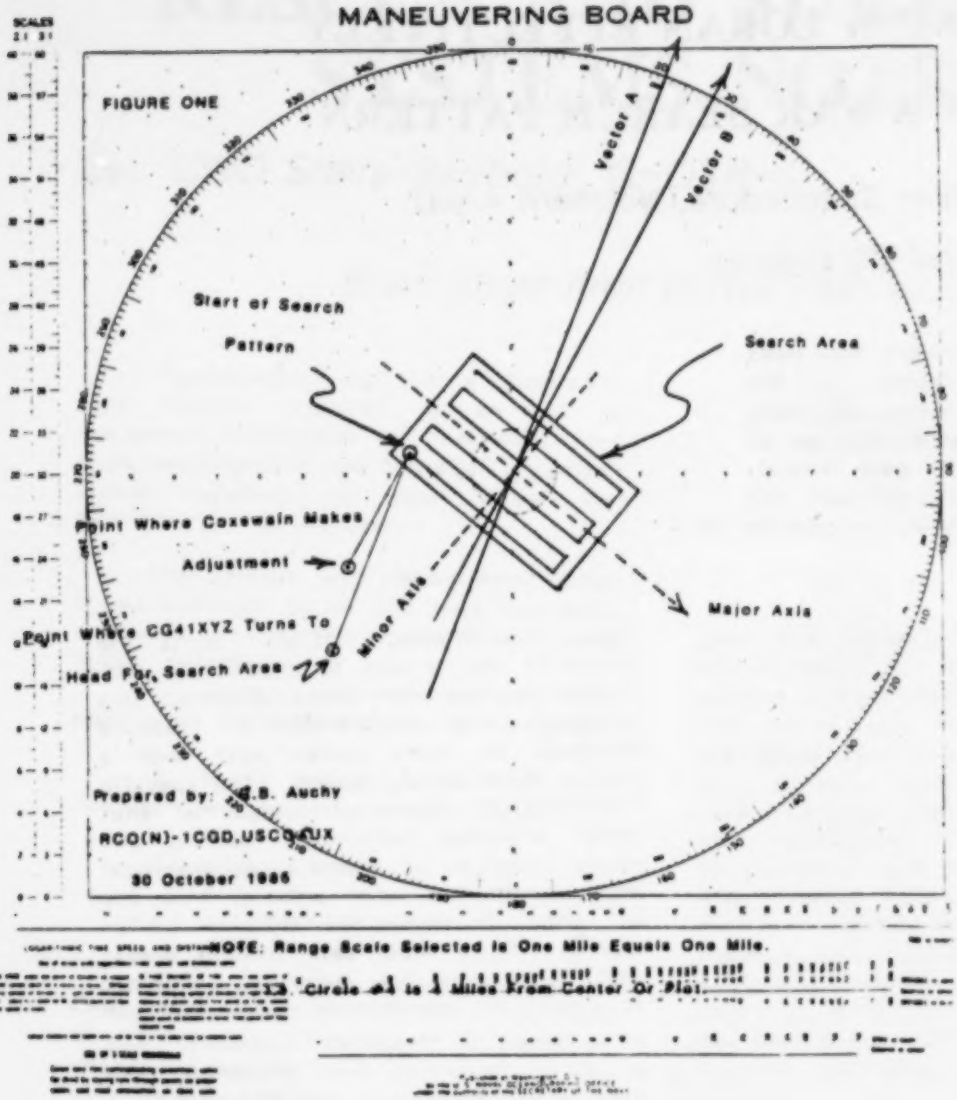
USCG Aux., 1st CG District

Editor's note: We thought this next article was interesting. It's usefullness to to readers will vary depending upon the sophistication of the loran installed in your vessel. As the author puts it, it's just one more item the coxswain can put in his bag of tricks.

LORAN C has provided not only the small craft of the U.S. Coast Guard with an easy to use, highly precise navigational tool but also as it becomes less costly many Auxiliarists are equipping their facilities with it too. These systems with their micro-processing and "way-point" capabilities can serve both to enable the Coxswain to navigate through a search pattern with enhanced precision and provide the SAR Mission Coordinator (SMC) with a much higher degree of confidence that a given search area has been covered properly, all of which, contribute to the more efficient, effective use of SAR resources.

The question does arise, however, as to how these features can be best utilized for these purposes while hopefully avoiding some of the cumbersome, error-prone procedures inherent when attempting to perform detailed chart work on small craft at sea with limited navigational facilities. We all know that under these conditions, for example, it can become very difficult to plot frequently and repeatedly Latitude/Longitude (LAT/LONG) or Time Delay Coordinates (TDC's). It is the intent of this article to describe a very simple system for accomplishing this utilizing the "WAYPOINT" feature provided in most Loran sets and a simple Maneuvering Board. The specific "WAYPOINT" feature needed is that which provided continuous bearing and range data to a specific geographical point which has been entered into the set either in terms of TDC's or LAT/-LONG. Since most sets contain provision to account for magnetic variation, it should be possible to work this out in a "true" or "magnetic" context. Let us first describe the procedure and then follow through withan example.

Assume that a Coxswain has been assigned a specific area in which to conduct the search plan assigned. The very first thing the Coxswain should do is to lay out on a navigational chart sufficient data about the search area to provide assurance that no navigational hazards exist in the search area. This is important, since from this point on he or she will be working primarily with the LORAN and a Maneuvering Board. Next it will be necessary to select one



raphic reference point at, in, or the search area and identify it in s of TOC's or LAT/LONG. This t will be entered into the LORAN a WAYPOINT and from then on ughout the search the LORAN shall lirected to display continuously the ing and range to this point. The ing will be in degrees (either netic or true depending upon how set can be programmed) and the e usually in miles and tenths of a . This point can be the center point of the search area, the start point of the search (which usually works well for Sector (V) or Expanding Square (S) searches), or any arbitrarily selected geographic point n the area.

This point is then plotted in the center of the Maneuvering Board and the search pattern is laid out on the Maneuvering Board in a manner so that each point on the search pattern can be identified in terms of a bearing and range from the center. The stage is

now set to conduct the search! The Coxswain need only observe the bearing and range to this point on the LORAN and plot a point on the Maneuvering Board on the reciprocal of the bearing at the range indicated. This is very easily done since the Maneuvering Board is printed with actual bearings just outside of the number ten (10) circle and their reciprocals just inside of it. The Coxswain will be able to identify immediately not only where he is but where he has to go to conform to the search pattern. It becomes a very simple matter to lay out a line from the present, position to the desired position, use a parallel rule (or similar device) to move this line to the center of the Maneuvering Board and read the course to steer on the outer edge. Thus by utilizing this simple range/bearing input with simple plotting techniques on a Maneuvering Board, it is easily to identify where to steer to initiate the search pattern; keep track of progress along the search pattern, identify quickly when the unit is deviating from the pattern and work out course adjustments to remain on or get back on the pattern. A practical example of how this works follows:

CG41XYZ is directed to conduct a PS search of an area 3 x 5 miles; Center Point is specified in LAT/LONG; Major Axis 130M; and Track Spacing is to be 0.5 miles. The Coxswain verifies that the LORAN has had the magnetic variation programmed into it so that all bearings and courses displayed will be in magnetic. The Coxswain next decides to use the Center Point given above at the reference point for plotting the search on the Maneuvering Board, i.e. it will be the center of the Maneuvering Board. Next, the search pattern is laid out on the Maneuvering Board oriented along 130M (See Figure One); the LAT/LONG (or TDC of the reference point is entered into the LORAN as a WAYPOINT; and the LORAN set up continuously to display the bearing (which will be in magnetic) and range to this WAYPOINT.

As soon as CG-41XYZ clears the sea buoy, the bearing and range to the reference point is observed to be 045M, 6 miles and is plotted on the Maneuvering Board at 225M (the reciprocal), at 6 miles from the center. At this point, it is convenient to select a range scale of 1 range ring equals 1 mile although other scales can be selected to fit the circumstances. (See Figure One). The Coxswain can immediately see CG-41XYZ's position in relation to the start point, lay a parallel rule along the two points, translate that direction to the center of the Maneuvering Board, and read the course to steer directly where the line intersects the #10 ring which turns out to be C 021 M (See Figure One, Vector A). While steering C 021 M en route to the start point, the Coxswain checks progress by taking and plotting another reading which turns out to be 060 M, 4.5 miles. This plots to the left of the intended track so in a similar manner as above a new course of 028 M is worked out (Figure One - Vector B). This can be done as often as necessary to assure an accurate arrival at the start point. If there is time criteria to be met, that too can be easily calculated in to determine the required speed. The very same technique can be used as often as necessary not only to get to the start point of the search, but also to keep the search vessel on it's intended search track.

The beauty of this system is that it is simple, easily taught, involves plotting techniques that are not as much prone to errors to detail, and is accurate to within the tolerances of the LORAN C. Since it is an accurate "quick and dirty" method, it suggests that the boat crews need not be as preoccupied with navigational accuracy as they might other wise be, which will in turn allow them to devote more attention to the primary task of searching.

PREVENTIVE SAR

by: Laura Burchard, G-BAU-1

Offense, it is claimed, is the best defense. The Coast Guard Auxiliary uses this approach approach continually to combat the problems of recreational boating safety. Preventive SAR is what it's called.

While the Auxiliary does nearly 20% of the pleasure boat search and rescue, it does almost 100% of the Coast Guard's boating safety education. Teaching boaters how to stay out of trouble is preventive SAR. Auxiliary flotillas around the country—in every state and territory— offer a variety of courses for boaters with all interests—power boaters and sailors: those wanting in-depth information and those with only a few hours to spare. In 1985, there were 332,524 boaters enrolled in auxiliary classes. Over 13,000 Auxiliarists volunteered as instructors.

But there is more to Auxiliary preventive SAR than classroom instruction. Auxiliarists present civic lectures to local organizations and last year had a cumulative audience total of over 400,000 people. In '85, Auxiliarists gave courtesy marine examinations (CME) to approximately 300,000 boats—each an examination of a boats safety equipment plus a one-on-one discussion of boating safety with the craft's owner. In addition, Auxiliarist's used their own vessels to patrol over 200,000 hours and were a constant boating safety reminder on the water by their exemplary skill.

"Boating Safety begins with the sales slip" is the belief behind the Auxiliary Marine Dealer Program. Auxiliarists make routine visits to marine dealers, keeping them abreast of Auxiliary preventive SAR activities. They solicit dealer cooperation in encouraging boat buyers to take a boating safety course, have a courtesy marine examination and to be aware that boating is a sport—like any other—for which you must acquire a skill.

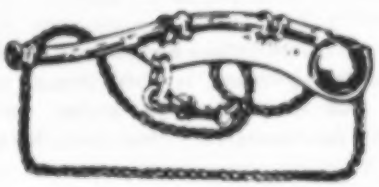
There is, of course, no way to compile figures to prove that preventive SAR works or indicate lives saved when there is no apparent danger. "Apparent" is the key word. One re-affirming experience illustrates this point.

An auxiliarist tells of waiting fruitlessly all morning for boaters to come for a courtesy marine examination. Finally, at the last minute, one boater, at the recommendation of the dealer, brought in a brand new aquisition. A CME check discovered that the ground wire from a gas cap to the tank was not connected. A little thing , but it had to be remedied to earn the CME "Seal of approval" decal. Auxiliarists wondered if their time, starting at 6 AM, had been wasted. That is , they wondered until the next morning when they read that a sister boat had exploded while fueling, with loss of life. The reason: The ground wire on the filler tube on the fuel tank was not connected and could have contributed to the fatal explosion. The auxiliarists lone CME had undoubtedly been preventive SAR. The only kind of SAR the Coast Guard wishes were necessary. That will probably never be—but auxiliarists are working on it.

With the auxiliarist's boating education, CMEs and other activities on behalf of preventive SAR, it seems fair to say that auxiliarists too can be called "the lifesavers"

MISHAP DEBRIEF

by: CWO Jake Miller, G-OSR-1



Last year, a Coast Guardsman on board a small cutter was seriously injured during an evolution to weigh the boat's anchor. Anchoring and weighing anchor are not the most complicated evolutions done afloat. Although not performed very often, they do have the potential to cause serious bodily harm, as in this case where a crewman lost a foot, if proper procedures are not followed.

The base line for any evolution is the people making up the detail. In this case, with three hundred feet of line out and winds gusting to 30 knots, two untrained personnel were sent to the bow of the cutter to take up slack in preparation for weighing the anchor. Ideally, a detail should fulfill three requirements. It should be (1), made up of trained people familiar with the gear and the procedures involved, (2) include an adequate number of people to do the job under the current conditions, and (3) have a supervisor assigned. Of course, with the normal turnover on Coast Guard units and, as happened here, with concurrent operations, the number of people and their training and experience are not always easy to control. Most evolutions on small cutters and station's boats become, by necessity, all hands evolutions. Everyone gets a chance to be be a deckie.

The most important aspect in the make up of the detail is supervision. There should be one person, <u>on deck</u>, assigned to the job of supervising the evolution. To increase the safety factor, the person assigned to supervise should not only be knowledgeable, but should not have any designated manual tasks in the detail. You don't want him or her to be distracted. The two crewmen on this cutter were being supervised by personnel on the bridge through the use of a loud hailer.

This boat, like most, uses a nylon anchor line that is tended by hand, with any power assist coming from the boat's propulsion. As the boat was brought up to the anchor using its engines, one crewman hauled on the line while the other coiled it on deck. The BCSM recommends faking the line as it comes on deck. In this instance, faking would have been a better method, for even though it requires more deck space, it does not leave a large bight of line on the deck and, if need be, will run more freely than line from a coil. To immediately fake a line out of the way of the line haulers, requires at least two people: one person probably could not keep up. <u>BUT</u>, the best place to put the tow line as it comes on deck is right back down the hawse pipe and into its locker. This also requires an extra body and might take some effort to straighten out later, but it eliminates the most present danger involved in weighing the anchor, of having the line on the deck.

The crewmen did keep a turn on the bow cleat. Its usefulness had to be limited though, as it is hard not to

keep most of the slack on the anchor end of the line as it comes on board. Working the line over the bitt is a full time job for one person.

Even with the personnel and the methods being used, it still required bad timing and bad luck in order for this accident to happen. The bad luck and timing started when one of the crewmen lost his hat when a 35 knot gust of wind struck the boat. He quickly recovered his hat, but by then the other crewman had lost control of the line. The drifting boat quickly ran out about 200 feet of the line on deck. Moving to help, and attempting to get a turn over the bitt with his hat in his hand, his foot was caught in a bight of the running line and pulled across the deck into the chock.

When the boat started to run with the line, one of the crew from the bridge ran to the foredeck. Upon seeing his shipmate caught in the line, he grabbed the fire ax and began to cut the line. Unfortunately, before he could cut the line, the man's foot was completely severed. At first glance, this may seem improbable, but if you multiply the weight of the boat by the probable acceleration in a thirty knot wind over 200 feet, the amount of force generated was obviously sufficient to sever a limb.

Some quick, good EMS work by the crew saved the man and prepared him for MEDEVACs to the nearest hospital. At the hospital, an effort was made to restore the foot, but was ultimately unsuccessful.

Working around the water and boats has long been known to be one of the most hazardous occupations. Fishermen, for instance, have statistically the most dangerous job in the country. Part of the problem would seem to be the inherent danger involved in the environment we work in. Boats go far off shore, riding upon a capricious and unpredictable medium, away from medical facilities, and their operations task their crews with potentially dangerous evolutions. In the Coast Guard, we mitigate these dangers by spending time on training and money on equipment. We are still not immune to accidents. Because of this, all of the evolutions we perform aboard our cutters must be well thought out and practiced thoroughly before we are required to do them, and then performed with the utmost diligence. It seems that it is always the commonplace operation done underway that ends up hurting people. Only by treating every evolution with proper respect for the dangers involved, can accidents be prevented.

THE SPEED/RPM CHART REVISITED

by: William J. Laudeman, 025-06-02-047

One of boating's esoterica, the venerable Speed/RPM chart keeps surfacing like the Loch Ness Monster...just when we think it's gone forever, it raises it's head again.

Now that most new boats are factory equipped with "speedometers", and there are a dozen or more add-on units which boast micro-computerized, turbinized, electronic accuracy, and

more features than most of us can use...why does anyone need the old S/R (Speed/Rev) chart or table? Well, there are a couple of good reasons: despite the improvements brought about by transistorized wonder machines, the need for your S/R table is undeminished.

Why? Because (1) the impact tube speedometer (the type using a short tube in the water, with an indicator whose scale is highly compressed at low speeds) is very inaccurate below about 10 m.p.h (about 15 ft/sec.) and is easily damaged by floating weeds or other debris. (2) The more modern paddle wheel or turbine driven types are subject to damage from debris, and can be easily rendered useless (temporarily, but useless nonetheless) by algae or barnacles growing on the speed transducer itself.

On the other hand, your engine tachometer, the source of the RPM data, is quite accurate and very dependable. True, the relationship between RPM and speed is subject to such factors as weed and barnacle fouling of the boat's hull, but these do not usually cause serious errors, and in any case, do not entirely prevent the use of the system.

So don't scrap your old S/R chart or table, but bring it up to date, and increase it's usefulness by making it a true LOGISTICS table. A suggested format is shown, but your own arrangement may be more suitable for your purposes. The figures will have to be scaled to fit the performance of your boat, but the basic idea is to give you instant answers to a couple of vital questions which arise often in SAR and patrol situations: "How long will it take to get from here to there?", and "How much fuel is needed to go (X) miles at (Y) speed?" The corollaries to these are also pretty important at times: "How far can we go on our current fuel reserve at (X) speed?", and "If we go (X) miles at (Y) speed, how much fuel will we have left then?"

AS always, speed is expressed through the water (T/W) and effects of wind and current have been considered by the navigator. Furthermore, it is good to be a little pessimistic about fuel consumption and speed figures because it is better to be early with more fuel than late without enough.

AVENTURA Speed/R.P.M. logistics table

RPM/100	MPH T/W	FUEL USAGE G/Hr.	FUEL USAGE Mi/G	Min./Mi. T/W
10	1	.33	3	60
12.5	2	.8	2.5	30
15	3.5	1.8	2	17
17.5	5	3.3	1.5	12
20	7	5	1.4	8.5
22.5	8	6.7	1.2	7.5
25	9	9	1	6.7
27.5	9.5	11.9	.8	6.3
30	10	16	.7	6

The RPM column should be based on the indication for your particular instrument. Mine reads "20" for 2000 RPM. MPH T/W stands for miles per hour through the water...as you can see, we are strictly a slow boat. Fuel usage is shown in both gallons per hour and miles per gallon so that you can estimate consumption easily, regardless of which way you enter the chart. The last column, (minutes per mile through the water) may not be needed by those who can divide 60 by MPH T/W in their head, but when you are asked for your ETA by Groups radio operator, you may find it quite helpful to know that at 2750 RPM you will make a mile every 6.3 minutes, and thus five miles will be (quickly now!) about 32 minutes.

How to Make Your ZODIAC into a Decent Boat

by: BM1 Steve Huffstutler, CG Station Quillayute River

Everyone is raving about the RHI these days, and rightly so I think. Unfortunately, not everybody gets one and the RHI is not the best boat for some jobs. Anyone who has landed an ANT team on a rocky island knows that one of two things is going to happen: either the ANTs are going to have wet feet, or your brand new RHI is going to have a dinged fiberglas bottom. Better the ANTs should have wet feet, say the Boatswain Mates, but there is a better boat for this application and for many others as well.

Enter that under-inflated, under-oared, more than likely paint spotted old Coast Guard issue Zodiac. The Z boat can get in to the island, land the Ants and get back out with a minimum of hassle and wet feet, it saves wear and tear on your sexy new Avon, too. It can make a beach landing and be picked up, turned around and launched off the beach by two people. Try that with a 5M Avon.

Unfortunately, the Zodiac does not come set up properly for Coast Guard use. Consequently, it gets neglected and often relegated to the status of soogie boat or paint float. We can make this heap into a resource to be proud of though, all it takes is a little labor and some money from the command. Not a whole lot of either, it won't break the budget or your back.

First off, we have to realize that Zodiac is trying to please everyone with their boats so they can sell more of them. That means that there are some compromises in your boat that render it less useful for the heavy duty commercial use that the average Coastie inflicts on it. The best example of compromise is the segmented floorboard. This little jewel is the biggest headache ever invented by a boat manufacturer and is simply not warranted for Coast Guard use. So, first project, remove the segmented floor and replace it with a one piece floor made from 3/4" Marine grade plywood that has been fiberglassed on both sides. This floor makes the boat much more responsive and eliminates that uncomfortable flex action. You should also put in some foot straps, similar to the Avon's. You can do this by drilling holes in the floorboard and simply knotting some nylon webbing on the bottom of the board. The straps make this boat a lot safer and give the operator and crewman a sense of well being knowing they will not not be forcibly ejected during turns and on choppy days.

Next, we remove the standard 6 gallon metal tank that is usually stowed in the stern and replace it with a 6 or 8 gallon triangular fuel bladder which straps in nicely with a couple of carabiners in the bow. This means that not only have we removed this monster from where we are trying to run the boat from, we have also added ballast in the bow, where we need it, and we don't have a large metal object messing

up our new fiberglas job.

The boat should be set up for two people, the operator on the port side aft and the crewman on the starboard side forward. This particular arrangement may seem strange to old outboard hands, but if you'll give it a try, the logic becomes inescapable. First, you have the complete arc of the engine available if you are sitting next to the tiller. Secondly, when you're running, you really don't need access to the gear shift, and even if you do need to shift gears, you can still reach them. A handle glued to the sponson should be provided for the coxswain as this boat should be operated from a seated position atop the sponson. The crewman should have, in addition to his foot strap, a handle on the sponson and a line from the bow to hang onto. These seating arrangements provide trim for the boat and comfort for the crew.

Okay, you say, I can make this boat into a usable resource, but that doesn't change the fact that it's ugly and covered with spots of red, white and blue paint. How can I be proud of that?

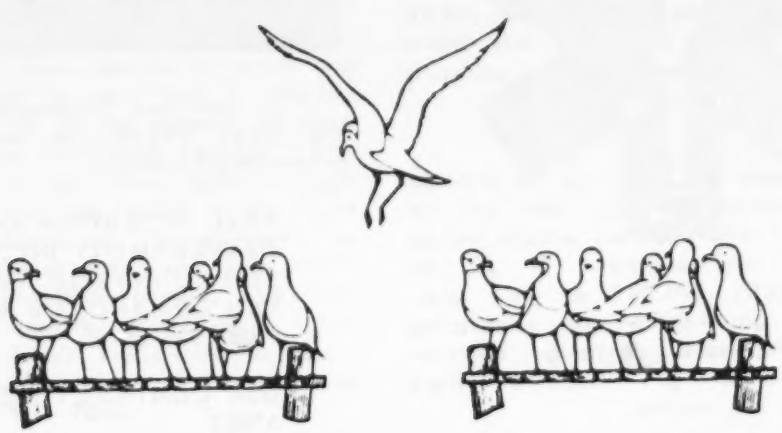
Well, believe it or not, you can paint that heap and make it look brand new. You have to buy Hypalon paint; it comes in grey or black and is available from most marine supply houses or from Zodiac. The next thing to do is buy some black, 4" Coast Guard legends (3M) and stick them on the sides. You can steal the ET's heat gun and give them a little shot of heat after you stick them on, it welds the sticker right to the fabric and looks real nice.

The fuel tanks and glue as well as all kinds of other goodies are available on GSA contract from Seagull Marine in Irvine, Ca. who is also the provider of the Avon's.

The last thing that I suggest you do is to see about taking the course offered on RHI and Zodiac operation by Marine Rescue Consultants. It'll give you a lot of good ideas on setup and use of your Avon and your Zodiac.

So, don't let that old Z boat rot; fix it up and have some fun.

Editor's Note: We agree Steve. The ZODIAC does have it's place in the Coast Guard's inventory of small boats. Funding small boat replacements is becoming an increasingly difficult job. It's good to see people like you out there who are doing all they can to get the maximum useful life out of our limited SAR resources and encouraging others to do so too.



EMT CORNER

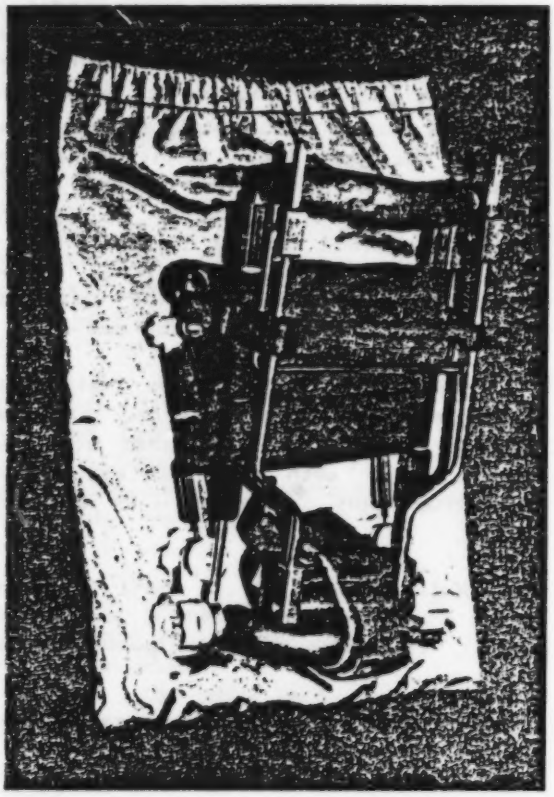
The REEL Splint

by: HS2 Tony Guerra, TRACEN Petaluma

Many of you "vintage" EMTs are hearing from recent graduates of the Coast Guard Emergency Medical Technician School in Petaluma about the REEL SPLINT. It is a multi-purpose traction splint that not only provides traction for treatment of a fractured femur, but also has the capability to provide immobilization for angulated fractures and dislocations of the lower extremities, immobilization of the hip and and is also available in a pediatric size which is ideal for adult arm splinting. In addition, the REEL SPLINT is stored in its own storage bag of ballistic rip-stop nylon which can survive being bounced around on any small boat. The whole unit fits snugly in a 8" x 12" space.

The REEL SPLINT has been approved as a replacement, on an attrition basis, for the HARE TRACTION SPLINT in your supplemental EMT gear. Please don't toss out your HARE TRACTION SPLINT if you have one. The HARE TRACTION SPLINT is still a fine splint and was the premier traction splinting device for quite some time.

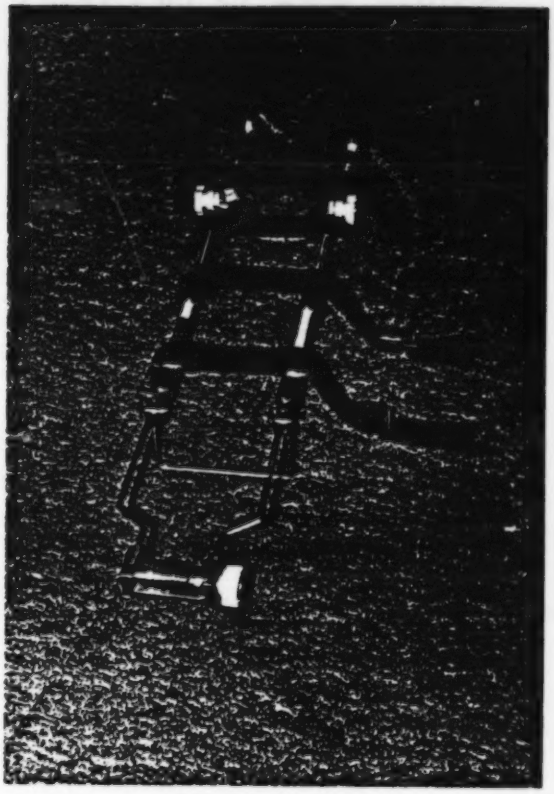
Space does not allow us to provide instruction concerning the use of the REEL SPLINT and such an article would not do the tool justice. If you do procure a REEL SPLINT at your unit, we suggest you start out practicing and using the basic posterior traction application until you become more familiar with the splint.

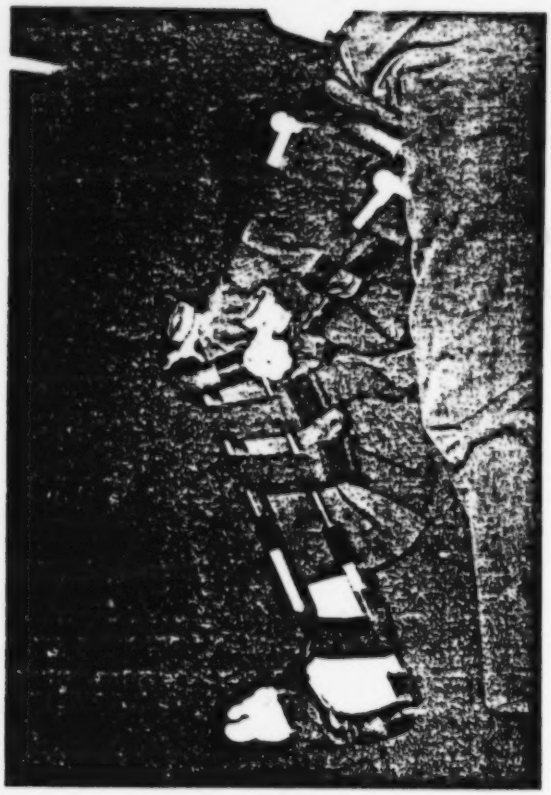


If you are interested in obtaining the REEL SPLINT or would like more information contact:

REEL RESEARCH AND
DEVELOPMENT INC.
9533 SUNNYSIDE AVENUE
BEN LOMAND, CA 95005
(408) 336-5673

GSA CONTRACT NO.: GS-08F-37823





When you purchase a REEL SPLINT, contact us here at the EMT school and we will loan you a short 21 minute training tape for the REEL SPLINT.

HELP WANTED:
INSTRUCTORS NEEDED!

As we all know, every few years the "Detailers" have people to move and jobs which need to be filled . During the next year or so we expect to have a need for the following ratings ASM, MK and HS. If you have been through the CG EMT program, been in the field receiving operational experience in emergency medical SAR and are interested in instructing others, we are interested in hearing from you. You may contact CWO OSBORNE or HSC MEYER for more information about the school at FTS 623 7040.

Dear ON SCENE Editor,

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DEADLINE

The deadline for submitting "letters to the editor" to appear in the next issue of ON SCENE is 31 APRIL 1986.

ON SCENE welcomes its readers to submit articles of interest pertaining to Search and Rescue (SAR). Articles should be written in "plain English". If submitting photos, we prefer you send 5" X 7" B&W prints or color slides.

"If you submit an article for publication and have typed it on a "C3" it will save us typing time. Type the submission on a floppy disk (5 1/4 or 8 inch) and submit it with a printed copy of the article (double spaced). If requested, we will return the disk when we're done. If available to you, it may be possible to send your article via a phone MODEM. Articles may be submitted to:

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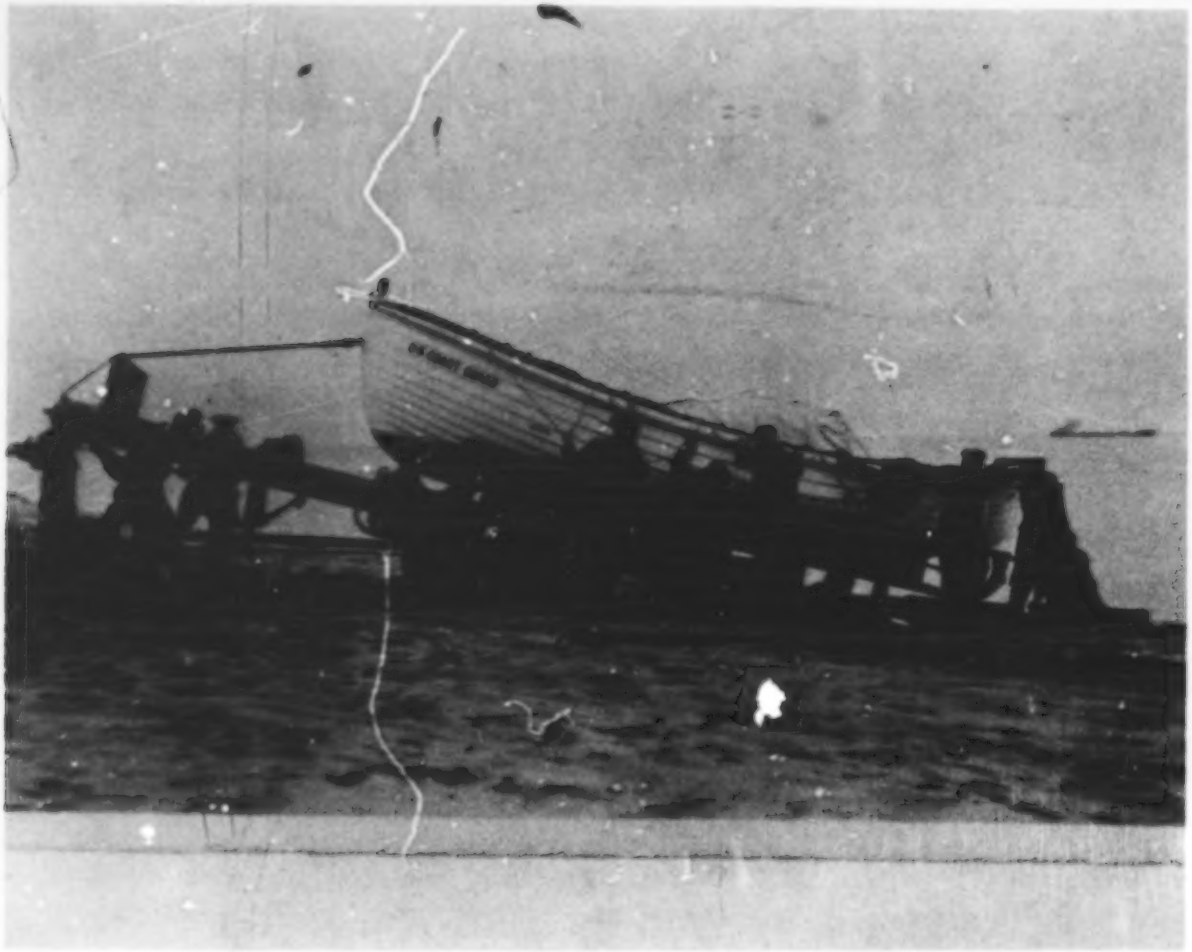

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Editor

ON SCENE is a quarterly, authorized, special interest publication, produced by the Operations Division for members of the U.S. Coast guard and the SAR community. Editorial content is not be considered as authority for official action nor as record material. Views and opinions expressed do not necessarily reflect those of the Department of Transportation or the U.S. Coast Guard.

About the Cover

1936 — Launching a standard 25 foot Motor Surf Boat...a typical evolution for many of our stations 50 years ago. More historical highlights can be found, starting on page 45.

Letters to the Editor

Editor's Note: We've had numerous replies in response to the old photograph on page twelve of the 1/86 issue. All replies were unanimous in placing the station in Louisville, KY. Two typical responses are printed below:

Dear ON SCENE,

On page 12 of the 1/1986 edition, you asked for identification of the floating "houseboat" station, as shown in the photo at the top of the page.

While I don't consider myself as "Old Guard" (I'm just on my 21st year with the Auxiliary), I think I can identify the station, or at least tell where one of them was located.

The photo could have been taken on the levee at Louisville, Kentucky, mile 604 Ohio River. This is the site of the first inland floating Coast Guard station that was located to protect mariners at the Falls of the Ohio. The station was established (well before my time), in the 1880's, and dis-established around 1971. I have many fond memories of the people associated with the station and Group Ohio River that was located thereon in the 1960's, to the date of deactivation. The station served as the focal point of Auxiliary operations for many years. It was a unit that we were proud to be associated with.

The "houseboat" is still located at the Louisville waterfront. She now serves as a wharf boat and office for the steamer Belle of Louisville.

Best Regards,
CHARLES H. BABB
Jeffersonville, IN.
47130

Dear ON SCENE,

Your "interesting piece of nostalgia" pictured on page 12 of your last issue is the famous Coast Guard Station located at Louisville, Kentucky - famous because it was long known as the governments only inland Lifesaving Station in the United States. It was established in 1881 as Station No. 10 and assigned to the Ninth Lifesaving District. The station differed from all others due to its unique location, and because it was a floating station that consisted of a barge with a house

constructed upon it. No suitable location could be found ashore, and at times when the river overflowed its banks, the station provided an adequate degree of protection.

Station No. 10 was located near the falls of the Ohio. This was a dangerous segment of the river where a number of lives and much property had been lost. In 1879, three local boatmen - William Devan, John Tully, and John Gillooly, were awarded Gold Lifesaving Medals for their heroic actions. The three men succeeded in saving 45 persons from the perils of the rapids since 1875. These three men, along with a fourth, constituted the crew of the station. William Devan was named keeper of the station for his part in the rescues.

The crew of Station No. 10 were also actively involved during times of severe flooding. With their boats, they rescued people from flooded houses, supplied food to the homeless, and ferried medical assistance to otherwise inaccessible reaches of the river.

LT Ronald B. Hoffman
Commandant (G-OCU)
Washington, DC
20593

With this issue, we bid fond farewell to Captain Joseph H. WUBBOLD III, aka, "Cap'n Joe". The captain, a frequent contributor to ON SCENE, will be retiring on 30 June after more than 30 years service, with a ceremony aboard CGC NORTHWIND. Captain Wubbold commanded NORTHWIND from July 1976 to July 1978.

His retirement plans include a tour of the U.S. and a visit to the EXPO in Vancouver, B.C. In October he'll be taking graduate courses at Scott Polar Institute in Cambridge, England. Then it's back to the D.C. area, where he plans to do consulting work.

Good luck Captain. You'll be missed.

MEDIVAC from the Fishing Vessel CHERYL MARIE

By: LT Jim Kelly
LTJG John Ochs
District 11 Operations Center

The Eleventh District's premier SAR case of 1985 was a MEDEVAC we performed in August. The 177 foot tuna seiner CHERYL MARIE, homeported in San Diego, had launched her five runabouts while setting her nets. A crewman fell overboard from one of the runabouts, and was struck by it's propeller. The victim, a 23 year old American male, had severe lacerations on the back of both of his legs. The wounds extended from his ankles to his buttocks, and had torn his skin and muscle tissue to the bone. The master of the vessel was able to stop the bleeding, and dress these near fatal wounds. There were no Naval or merchant vessels within 1000 miles of CHERYL MARIE available to provide medical assistance. The closest search and rescue resource was the Coast Guard Air Station in San Diego, 1440 miles away!

Tuesday, 06 August

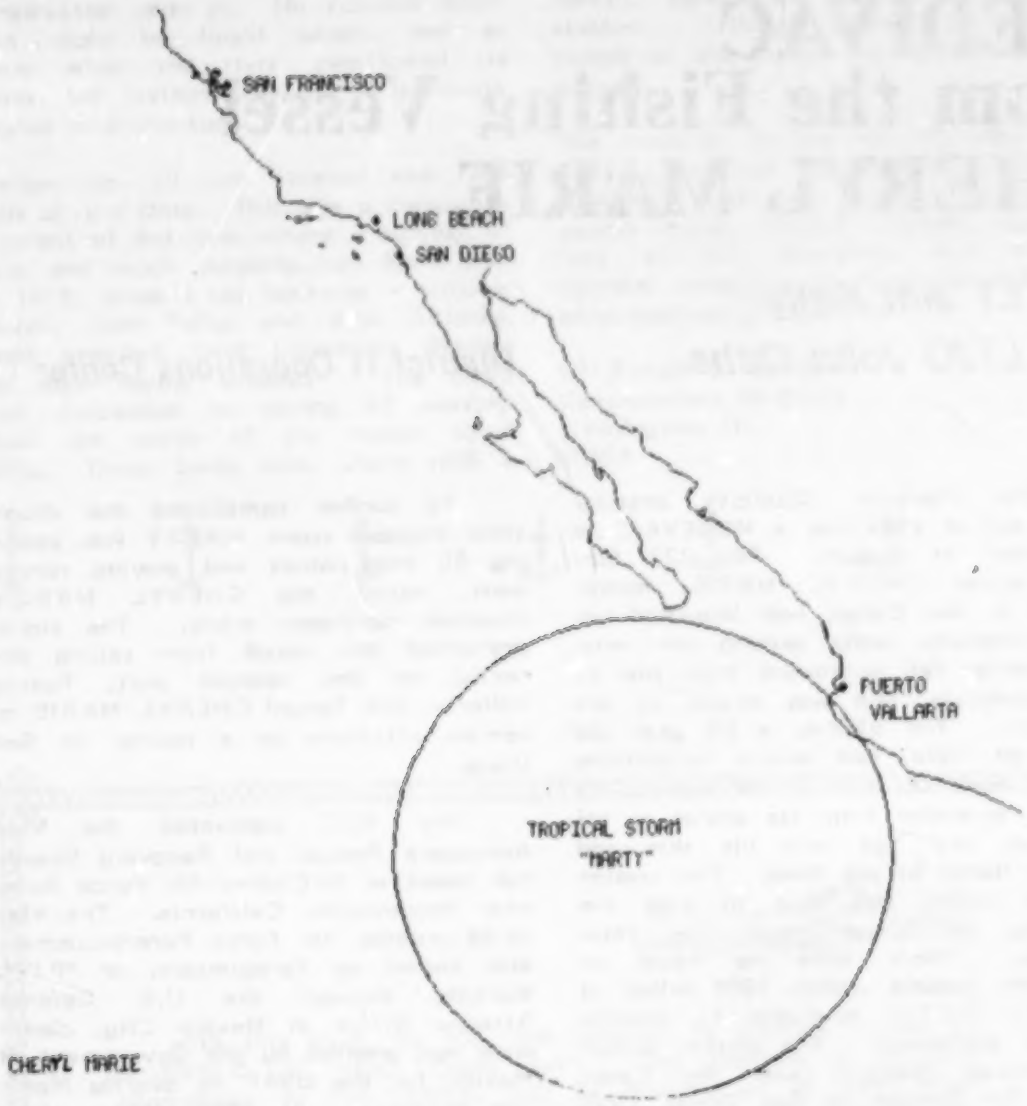
At 1152 CHERYL MARIE contacted the Eleventh District's Rescue Coordination Center, in Long Beach, via a high seas marine operator. Standard MEDICO procedures were followed, and the doctor assigned to the case verified that the wounds were life threatening. The dilemma facing the Controller was how to provide immediate professional medical assistance to the victim.

To further complicate the situation, tropical storm MARTY was packing 55 knot winds and moving northwest, across the CHERYL MARIE's intended northeast track. The storm prevented the vessel from sailing directly to the nearest port, Puerto Vallarta, and forced CHERYL MARIE to remain off-shore on a course for San Diego.

The RCC contacted the 41st Aerospace Rescue and Recovery Squadron based at McClellan Air Force Base, near Sacramento, California. The 41st could provide Air Force Pararescuemen, also known as Parajumpers, or "PJ's". Working through the U.S. Defense Attache Office in Mexico City, clearance was granted by the Government of Mexico for the USAF to overfly Mexican territory. At 2230 mission planning was complete and an Air Force HC-130 was airborne from McClellan AFB enroute Norton AFB, in San Bernardino, to refuel.

Wednesday, 07 August:

At 0155 the HC-130 was airborne from Norton, and after a four and a half hour, 1200 mile flight, the HC-130 arrived on scene with CHERYL MARIE. Forty minutes later, as darkness gave way to early morning gray, Air Force Tech Sergeant Landon Willhoite, and



Staff Sergeants Everett Evans and David Wilson executed a highly dangerous air drop from the HC-130, parachuting into the open ocean. Each PJ was equipped with about 300 pounds of gear! The PJ's swam to the ship and were safely hauled aboard. By 1020 the PJ's, who were called upon to provide medical care well in excess of that normally authorized for an EMT, were able to stabilize the patient and reported that an immediate MEDEVAC was not necessary.

Thursday, 08 August:

A radical change of pace began at 0935 when the PJ's requested permission to double the dosage of demerol they were administering to the patient. The RCC relayed the request to the USAF flight surgeon who was assigned to the case. The doctor denied the request, but recommended immediate MEDEVAC. According to the flight surgeon, the patient's condition could be

expected to deteriorate rapidly 72 hours after he was injured. Tropical storm Marty continued to force CHERYL MARIE away from Mexican hospitals, and San Diego was still 1000 miles to the north.

The RCC immediately began planning for a daylight helicopter hoist of the patient. Military air-refuelable helicopters were a possibility, but none are located in the southwest U.S. Gradually the framework of a plan emerged for a rescue using only USCG resources. Clearance was received from the Mexican government to operate from an unimproved dirt runway on Isla Cedros, a small offshore island halfway down the Baja peninsula. Since no jet fuel is available in that region, the helo would have to be refueled from a Coast Guard HC-130 on the ground. Because flight time would be excessive, extra helo aircrews would ride for part of the mission and fly the other portion.

At 1600, an HC-130 from Coast Guard Air Station Sacramento flew to Air Station San Diego to be pre-positioned for the next day's mission.

Friday, 09 August

At 0330 an Air Station San Diego's HH-3F was airborne enroute Isla Cedros. Two hours and fifteen minutes later, the HC-130 took off from San Diego enroute Isla Cedros. The HC-130 carried an additional helo crew, a Navy flight surgeon, Coast Guard news crew, and a local television news crew.

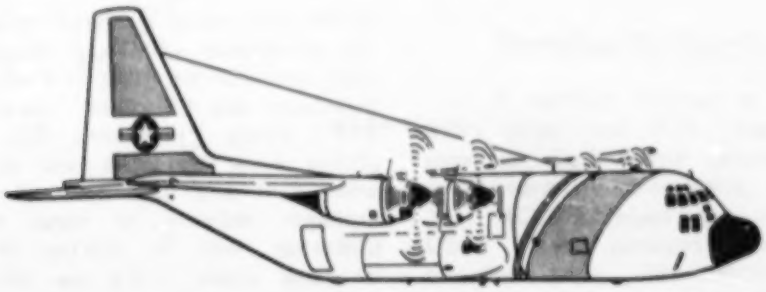
The situation facing the helo upon arriving at Cedros would be challenging. Flying at nearly it's maximum range without refueling, the H-3 pilot would have to quickly make a judgment whether the HC-130 could land and take off on the dirt field. If the field was too muddy, or had debris on it which would prevent the HC-130 from landing, the helo would have to immediately return to San Diego before it's fuel level dropped to below one half.

Landing conditions were acceptable at Cedros. Both aircraft set down and commenced refueling the helo. After 80 minutes on the ground, the refueled H-3 took off with a fresh flight crew and the Navy flight surgeon onboard. After allowing the helo a 25 minute head start, the HC-130 took off and headed out to CHERYL MARIE's expected position, 250 miles off-shore. Once the HC-130 was on scene it vectored in the H-3 to the vessel's position. Once on scene the H-3 immediately began to hoist the patient aboard. The aircraft commander determined that he could handle the added weight of the PJ's and their gear, and hoisted the three Air Force men also.

Returning to Isla Cedros, the refueling operation was repeated while the patient was transferred to the HC-130 and the helicopter crews were switched again. In 70 minutes both aircraft were airborne enroute San Diego.

The patient underwent surgery two hours after landing in San Diego to re-attach his torn muscles. He was operated on again the following day to close the wounds. The attending physicians predicted that he would regain the use of both of his legs. The patient was released from the hospital in two weeks, but would require months of rehabilitation.

The courage and professional expertise exhibited by the three USAF PJ's, and the determination and confidence displayed by the San Diego H-3 pilots pushing their aircraft to the limits of it's operational capabilities, were the critical factors in the successful prosecution of this life threatening case.



HH-65A DOLPHIN EMERGENCY EXITS

By: BM1 D.E. Wyatt

BM "A" School, Yorktown, VA.

One of the requirements in the BOAT CREW QUALIFICATION AND CERTIFICATION MANUAL, COMDTINST M16114.6, for qualification as a boat crewman, is the ability to locate the emergency entrances on the HH-52A and HH-3F helicopters. The information needed for this task is located in the BOAT CREW SEAMANSHIP MANUAL, COMDTINST M16114.5, chapter 15. The reason for this task is that if a helo crashes near your boat during hoisting operations, you may have to assist, and there may be only a very short time to evacuate any injured crewmembers.

The HH-65A DOLPHIN is replacing the aging fleet of HH-52As. The emergency entrance information for the DOLPHIN was unavailable for the last printing of the Seamanship Manual.

At the BM A school, RTC Yorktown, students soon started asking the question, "How do you get into the DOLPHIN if the need arises?" One quick phone call to LCDR Schaeffer at the Aviation Training Center, Mobile, AL provided the answer, complete with diagrams.

There are five entrances into the DOLPHIN: the Pilot Door, Passenger Door, the plastic window aft of the sliding passenger door on the starboard side, the Co-pilot door, and the hinged cabin door on the port side of the aircraft. The diagrams shown, clearly indicate these access points. In addition, emergency entrance and exit handles are clearly marked in yellow for easy identification. In an emergency, entrance may be gained by opening any door using the standard handles, or by jettisoning the door with the emergency door release handles marked for that purpose. The starboard window is jettisoned by pulling the red tabbed lanyard in the lower corner of the window and pushing the window out of its frame.

HH-65A DOLPHIN

As the use of the DOLPHIN becomes more widespread in the Coast Guard, there is an ever present danger that someday an accident may happen. Prior knowledge of, and familiarity with these emergency entrances could save a life.

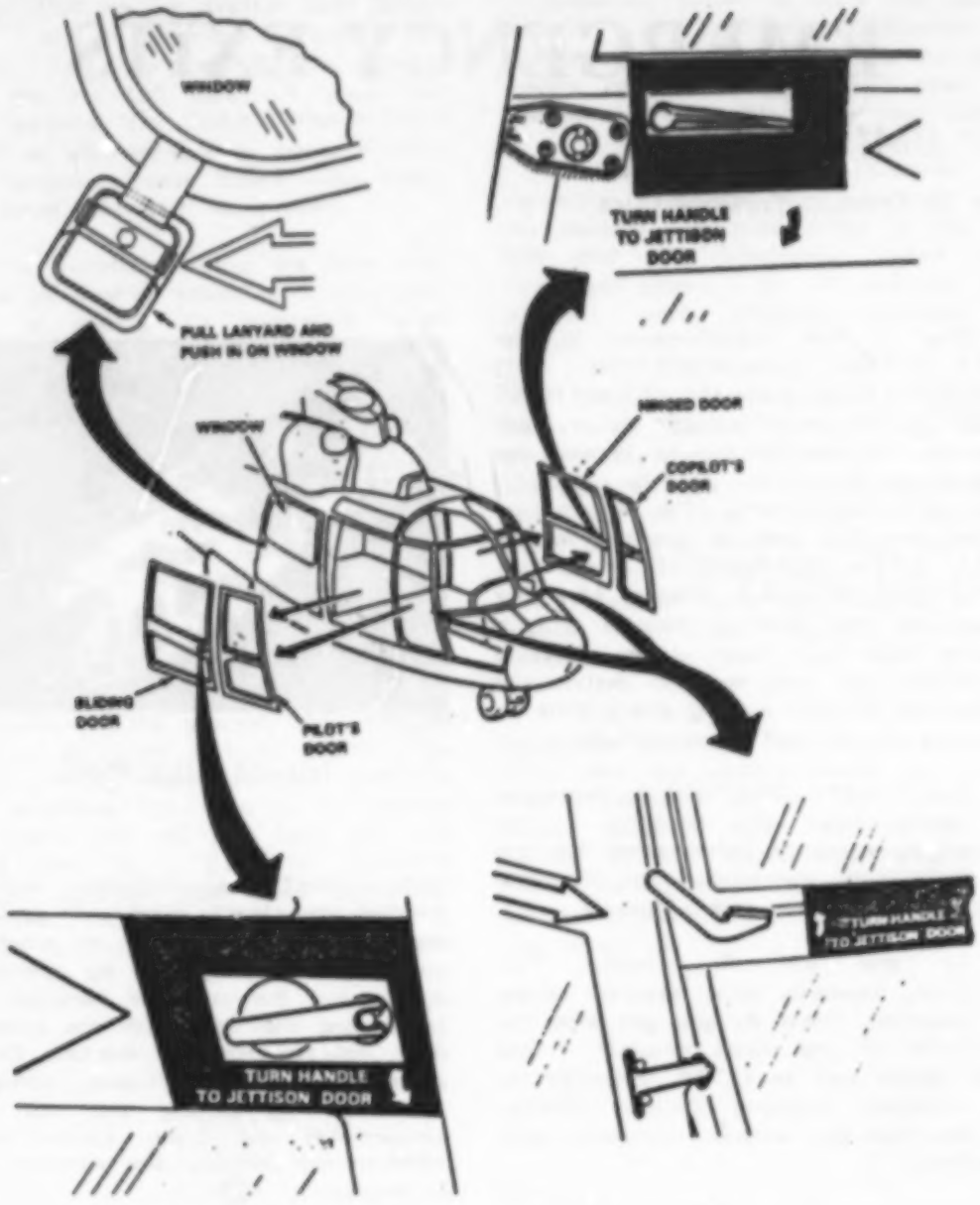


Diagram showing emergency exits on the HH-65A

USCG H-65A-1

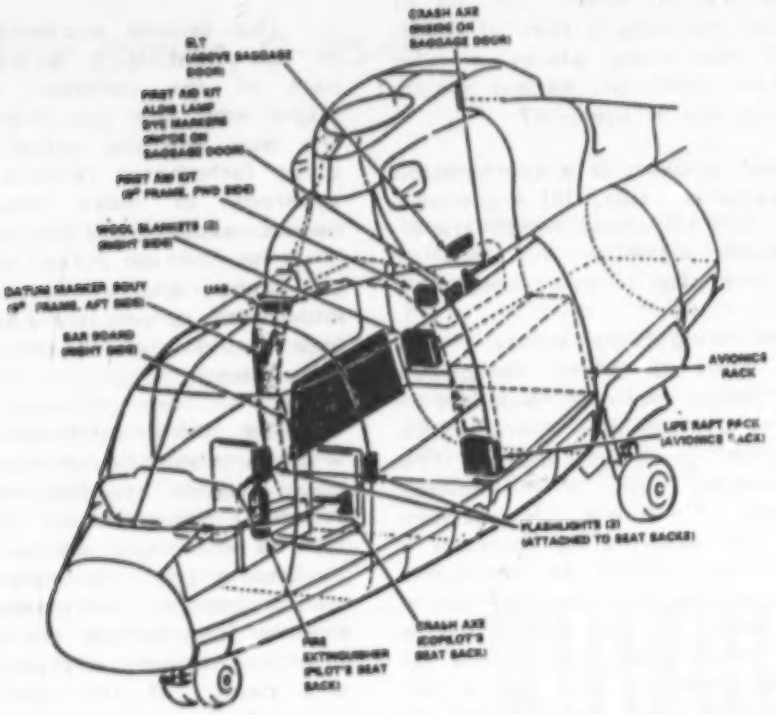


Diagram showing location of emergency equipment aboard the HH-65A

MISHAP DEBRIEF

By: CWO Jake Miller, G-OSR-2

This edition's debrief concerns a grounding, one of many we've seen lately. While cruising at slow speed, with a crew member other than the coxswain at the helm, one of our small boats was put aground. This took place while passing close aboard a marked obstruction. The crew's initial awareness of the situation seems to have come when the fathometer went from reading 15 feet to zero. When this happened, the helmsman informed the coxswain, who of course told him to stop the engines. He did, but ******* by then the boat was aground. Luckily, the boat was traveling at slow speed and the crew was able, after inspecting for hull damage, to extricate the boat and return to station.

Why did this take place? The crew in this case, was experienced. They

were working in familiar waters and the obstruction was marked. The visibility was great, with a fair breeze, but not much in the way of seas. On top of that, the boat has only 4 feet of draft. There aren't too many places a boat drawing 4 feet can't go, except maybe ashore, so why was it aground?

Small boat piloting is a combination of (1) navigational skills, (2) knowledge of the boat, and (3) sound watch standing. All these attributes (or lack of them) came into play in this mishap.

First, the navigational skills. From a practical point of view, navigation skills serve some definite purposes - determining where you are, where you're going, and when you'll get there. The one that matters here is - knowing where you are. There are many different methods for determining position; a certified coxswain should be proficient in all. You could, for example, run a navigational plot, as you would on a ship. This would keep you aware of where you had been and give you a fair idea of when to start looking for an obstruction, but probably wouldn't suffice for keeping you off it. While all coxswains should possess this skill, and not hesitate to use it during times of reduced visibility, it is probably neither necessary nor desirable while running a small boat around marked or known obstructions during periods of good visibility. If you can see a charted aid, and the aid is on station, as this one was, you know where you are.

I suggest keeping an eye on those parts of the environment that matter, such as the obstruction in this case. First, you must either consult the chart, or have it memorized (never underestimate the uses of accurate local knowledge), interpret what the chart says (buoys marking obstructions do not have the same symbol as sea or mid channel buoys), then set up some parameters for safely passing the obstruction. A radar range and/or a danger bearing will normally suffice. The idea of course, is to give an obstruction as wide a berth as possible.

The second attribute is knowledge of the boat. It is imperative (also part of the coxswain qualification, I might add) that you know the draft of the boat and the actual depth for any given fathometer reading. It should be apparent to most people, that you cannot expect a boat with 4 feet of draft to float in 3 feet of water. So if you know the boat's draft, and you know the error (transducer depth) in your fathometer, then you know the water depth.

The third attribute, the lack of which probably causes most accidents, is sound watch standing. Sound watch standing means paying constant attention to where you are and what is going on around you. It means taking those simple actions necessary to prevent trouble long before there is an actual need. This was obviously not done in this case. If the coxswain had acknowledged the need for extra care when approaching the obstruction, and took positive control of the boat, this accident might have been avoided. The obstruction was marked, so we can assume the cox'n knew there was a some caution necessary. The answer might have been to give the aid a wider berth, if possible, or maybe a closer watch could have been kept on the fathometer, or maybe the helmsman could have taken immediate action instead of wasting time relaying information back and forth with the coxswain. Unfortunately, in this case, passing the obstruction was "business as usual".

THE COAST GUARD MEDAL

By: LT Mark Byrum, G-PS-5

On 8 May 1985, CHASE experienced a catastrophic fire in the forward part of the engineroom. Equipment in the engineroom was secured and the space, rapidly filling with smoke, was evacuated. Petty Officer Rodgers was mustered on the messdeck when he learned that a shipmate was missing and believed to be trapped somewhere in the engineering spaces. Petty Officer Rodgers left his standby billet on the messdeck and began a search for the missing MK3. He searched the auxiliary machinery space and attempted to proceed aft to the engineroom, but was driven back by the intense heat and smoke of the fire.

He then went up and aft back to the messdeck, where he entered the engineroom control booth through the messdeck scuttle. In the control booth, Petty Officer Rodgers secured running machinery and fuel valves and then entered the burning engineroom to set up ventilation. Despite severe personal danger, he searched the forward upper level of the engineroom, the second level between the main diesel engines, and then aft, outboard of both reduction gears and the evaporator flat.

Unable to locate the missing man, Petty Officer Rodgers then went forward and searched the diesel oil pump room from above via a scuttle in the auxiliary machinery space, again with no success. He then entered the lower level of the engineroom from the diesel oil pump room about the same time as the fire party put out the fire and joined him in the lower level. One of the additional searchers found the missing petty officer who had perished despite Petty Officer Rodger's efforts. Petty Officer Rodgers demonstrated remarkable initiative, exceptional fortitude, and daring in spite of imminent personal danger. His actions are most heartily commended and are in keeping with the highest traditions of the United States Coast Guard.

SPACE SHUTTLE CHALLENGER RECOVERY OPERATIONS

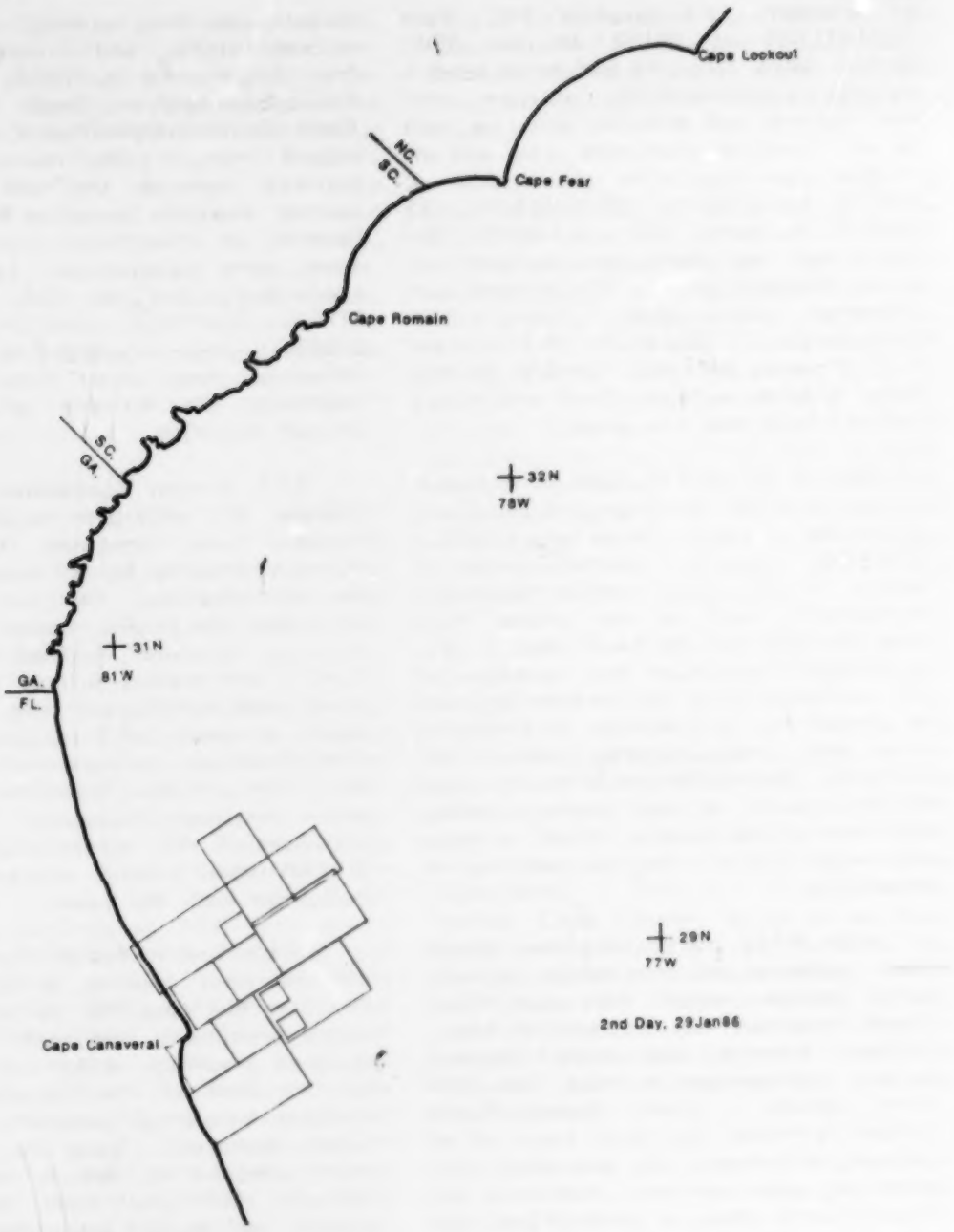
By: CAPT Peschel, CCGD7 (osr)

At 11:38 on the morning of 28 January 1986, the nation watched with excitement and pride as the Space Shuttle CHALLENGER (STS-51L) roared aloft from Cape Canaveral with our first "teacher in space". Seconds later, pride turned to dismay and grief as the CHALLENGER disappeared in a massive fireball. Millions of Americans continued to watch, with faint hope, as rescue and recovery forces converged on the scene.

The first units to respond were those tasked with maintenance of the launch security zone, and who were already airborne or underway. An Air Force AC-130 aircraft manned by reservists of the 919th Special Operations Group, USCGC POINT ROBERTS, and a Navy P-3C aircraft detailed to the Missile Range from Point Mugu Naval Air Station were witness to the tragedy, and took immediate action. Range Control at Kennedy Space Center, however, advised all units to remain clear of the impact area for fifty minutes, until the air was clear of debris falling from an altitude of five miles.

As POINT ROBERTS steamed into the impact area to assume initial on-scene command, Seventh Coast Guard District personnel were rapidly implementing the DOD Manager's Space Transportation System Contingency Support Operations Plan. Aircraft from Coast Guard Air Stations Clearwater and Miami were scrambled, and USCGC DAUNTLESS was diverted from winter law enforcement operations to provide a command and control platform. By mutual agreement with Kennedy Space Center, Seventh Coast Guard District assumed SAR Mission Coordinator (SMC).

By mid-afternoon, naval units from Destroyer Squadron Eight, USS AUBREY FITCH, USS SAMPSON, AND USS UNDERWOOD had arrived on scene and commenced initial recovery of floating remains from the CHALLENGER. USCGC DAUNTLESS, together with units from Naval Special War Unit Two Four arrived that evening, and assumed OSC from POINT ROBERTS until DALLAS could take over. Continuous air support was being provided by the Pt. Mugu P-3C , HC-130's and HH-3F's from CGAS Clearwater, AC-130's from 919th SOG, an HH-65A from CGAS Miami, and CH-3's from Det 15 39th ARRW, Patrick AFB. Aircraft spacing was provided by Radar Approach Control (RAPCON), Patrick AFB. To effect positive control, RAPCON was designated On Scene Commander (Air), and was augmented by Commander, Coast Guard Group Mayport, who had been designated by SMC as an on-scene adjunct/representative of SMC. This combination provided air control expertise and facilities with SAR experience to enable productive safe visual search.



DAUNTLESS utilized the two USN 65' PB's (under its OPCON for previous law enforcement operation), plus embarked small boats, as search and collection vehicles for what was to be the first of many nights of round-the-clock efforts. US Navy vessels also launched whaleboats as the first pieces of evidence were recovered.

Steaming at flank speed from the Atlantic Undersea Test and Evaluation Center (AUTEC) for ten and a half hours, USCGC DALLAS arrived on scene

at midnight, and assumed OSC from DAUNTLESS at 0015R on the 29th. Before dawn, DALLAS had established a reliable communications network with the floating and airborne units, as well as with involved shore-side units and air traffic control. With the arrival of USCGC SWEETGUM, USS SIMPSON, USS KOELSCH, and USS W.S.SIMS, the operation's task force now included ten major floating units. Air support was enhanced by units from NAS Jacksonville (CTG 24.5's P-3C's) and NAF Mayport (HSL-42's SH-60's) on this date, totaling a dozen fixed and rotary wing aircraft over the area.

During 29 January 1986, the monumental task of identifying, loading and preserving evidence from the CHALLENGER explosion yielded tons of debris, ranging from massive structural components, such as the orbiter nose and fuselage side, to small bits of tile. It became clear from the condition of the evidence that the devastation was so staggering in intensity it precluded even the most remote chance for survival. The search would be for clues to the cause of the explosion...clues that themselves posed a threat to those recovering them, due to toxicity or instability.

With NASA restricted from issuing press guidance and information on site, public affairs output fell upon Coast Guard resources who, because of international interest and media demand, became spokesperson to more than 1700 news people. Coast Guard Public Affairs remained the focal point of all recovery information for one solid week, garnering unprecedented exposure for Coast Guard units, in joint effort with Navy and Air Force counterparts, on nightly news casts and daily press accounts.

The weary crew of USCGC POINT ROBERTS, who had already been at sea for a week prior to the tragedy, suffered and repaired a main engine casualty as they gamely continued to recover debris, and transfer evidence from larger units to NASA personnel at Port Canaveral. Small boats from Coast Guard Station Port Canaveral also logged many, many hours conducting logistics runs to the task force and making shoreline searches for evidence. Several of the Naval units, diverted from other operations, were running precariously low on fuel. AUBREY FITCH, SAMPSON, UNDERWOOD and SIMPSON were all obliged to make brief refueling runs into Port Canaveral beginning the evening of the 29th through the 30th.

SAR Mission Coordinator began the process of Situation Report (SITREP) review from on-scene forces, and formulation of a Search Action Plan for the following day. The plan incorporated known conditions, results of previous activity, Computer Assisted Search Plan (CASP) information derived from generated wind and current data, and acquisition of resources from varied sources. The flow of message traffic to and from SMC, OSC, NASA/DOD sources, and on-scene resources drastically increased. SMC commenced a nightly SITREP that briefed everyone directly concerned with the case.

SMC's Search Action Plan sectioned off the total area to be searched for the first few days into ten mile squares where probability was high. OSC then assigned a surface vessel and a helicopter to each of the squares, with a discrete frequency, to control low level hover searches. Long range aircraft were assigned to search, at altitudes between 500 and 1500 feet, those sectors of lower probability. Good weather allowed probability of detection in the 76 - 99% range.

USCGC SWEETGUM recovered the first solid rocket booster (SRB) nose cone on the morning of the 30th, only to discover that the explosive units could not be fully disarmed by the

Explosive Ordnance Disposal Team. Consequently, SWEETGUM steamed to Canaveral to offload its sensitive cargo. The other nose cone had become the focus of a large search, and was finally located by a P-3C from CTG 24.5. USS DEWEY was diverted from sea trials on the 31st to recover the nose cone, which turned out to be too heavy for DEWEY's hoisting equipment. Therefore, while they stood drift watch, USS GUAM broke off to enter the operation and recover the nose cone on February 1st. The following day, a CH-46 helicopter from MCAS BEAUFORT ferried the elusive nose cone to Port Canaveral.

On 30 January 1986 USS W.S.SIMS, which had recovered a substantial quantity of debris the previous day, suffered a boiler casualty and was detached after transferring evidence to POINT ROBERTS.

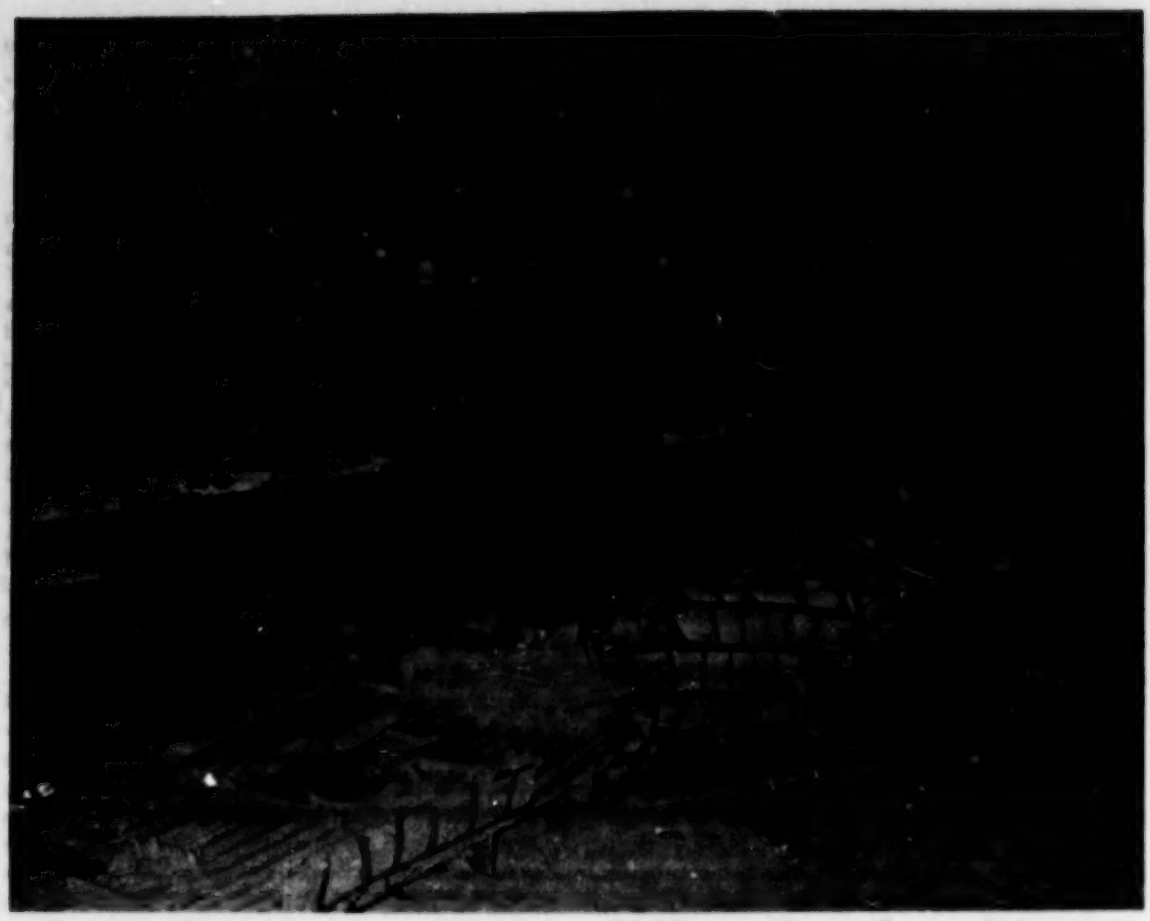
Also on the 30th, the District Commander and SAR Officer traveled to Cape Canaveral to discuss priorities and responsibilities with the NASA team assembled to investigate the mishap. With the Supervisor of Navy Salvage represented at Cape Canaveral, the agreement was made for the Coast Guard to continue as SMC for surface evidence, while undersea resources and their surface support vessels would remain outside SMC OPCON. NASA had,in effect, hired the Supervisor of Salvage to recover evidence from the sea bottom, with the Coast Guard's role for that portion of the operation to insure integrity of the area and to furnish reverse drift data (in an attempt to pinpoint bottom locations of debris possibly connected with surface recoveries).

Commitment of Seventh District air resources to heavy daily tasking began to build fatigue. Upon request, Commander Atlantic Area detached one HU-25 aircraft and crew, plus one HH-3F aircraft and crew from the Elizabeth City Air Station to Miami and Clearwater Air Stations respectively. One HU-25 and crew from Traverse City Air Station was also deployed to Miami.

Recovery of debris continued to yield substantial evidence including the SRB nose cone on the 30th. AUBREY FITCH recovered one of the orbiter's landing gear, a cargo bay door and several other components of the shuttle. DAUNTLESS, working with Navy 65' patrol boats, also recovered a large quantity of debris, including a sizable interior bulkhead. POINT ROBERTS continued to provide logistic support, despite a radar casualty. DALLAS loaded the largest single piece of evidence to be recovered, a 250 square-foot panel from the right side of the CHALLENGER fuselage.

Coast Guard Station Port Canaveral became a more important player, overseeing movement of vessels into the port for off-loading, and arranging shoreside logistics support. The station remained the operating base for a large press corps because of the media's desire for a more direct connection with happenings than through Cape Canaveral. The Air Force facility named Cape Leader, acted as an integral communications link between the Station, SMC's representative, NASA officials, and OSC, providing timely information flow for the best employment of resources and most productive transfer of evidence critical to the investigation.

Recovery and transfer of evidence to Port Canaveral was conducted on 31 January 1986 as weather remained ideal. DALLAS continued to direct the efforts of ten ships, six small boats, and fourteen aircraft. DALLAS, DAUNTLESS and SAMPSON all recovered sections of the orbiter's wings. KOELSCH also recovered a portion of a wing, as well as a large segment of fuselage bearing the word "UNITE...".



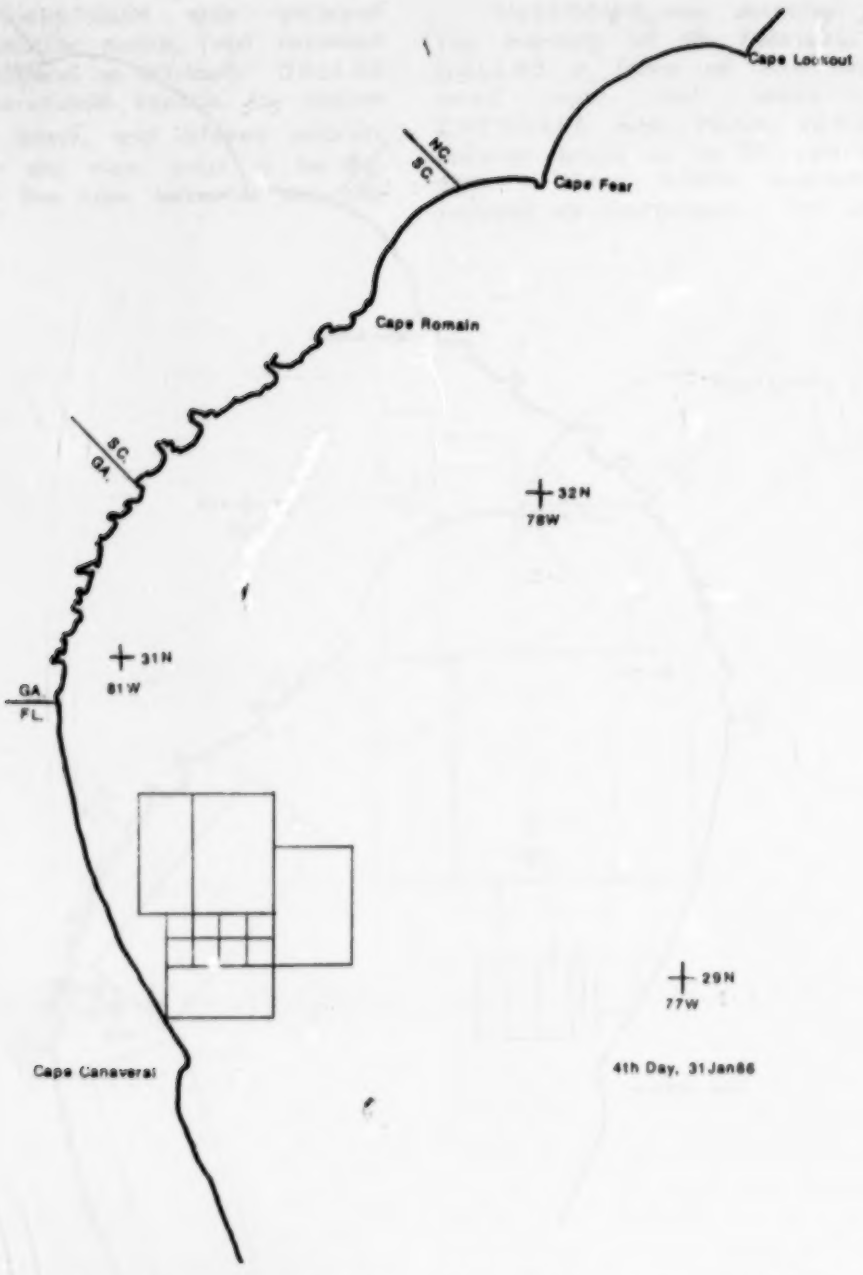
USCGC DALLAS off-loads debris from space shuttle CHALLENGER Jan 86

KOELSCH was detached at 2035R to resume normal operations.

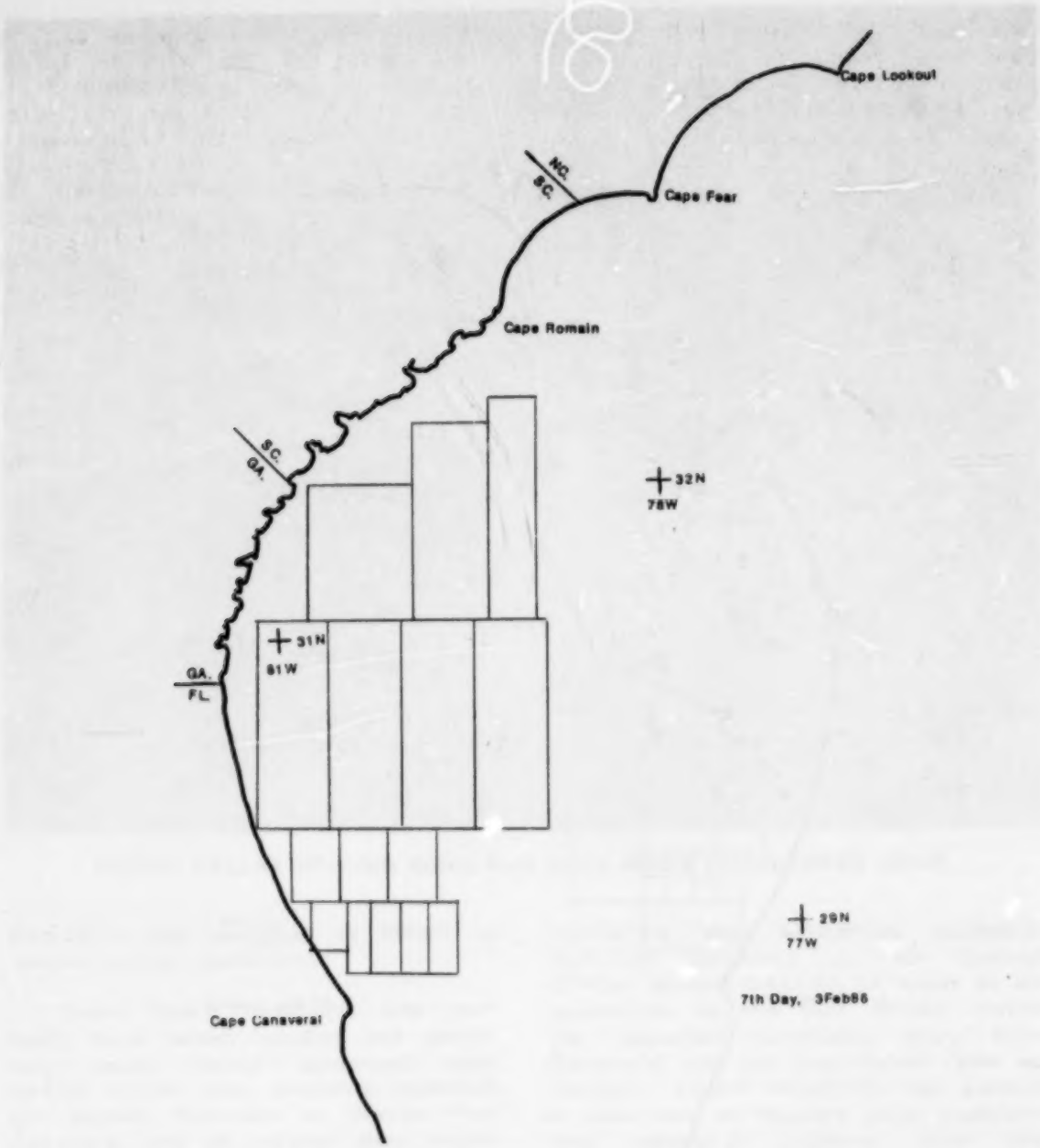
Coast Guard Reservists who normally form launch monitor and waterway patrol forces continued their special active duty providing logistical and support functions at Station Port Canaveral and at various sites within the Kennedy Space Center. Involvement of the Coast Guard family was complete when Auxiliarists covered the area from Cape Canaveral to Jacksonville, shoreline to three miles seaward, insuring that evidence would not wash up on the beaches undetected.

01 February was generally unproductive, with only DALLAS and GUAM recovering any substantial evidence. RAPCON embarked an Air Control Officer aboard DALLAS to assist in air operations, as the Gulf Stream moved the operation northward, away from Canaveral and the shore-based radar at Patrick. POINT ROBERTS was granted a crew rest at Mayport after transferring additional evidence from the CHALLENGER flight deck to DALLAS. The beleaguered crew of POINT ROBERTS enjoyed only a short rest, as they were underway at 0358R on 02 February for a SAR case.

The focus of air activities moved seaward of Jacksonville and Savannah. In view of the continued northward drift of significant debris, and the operational



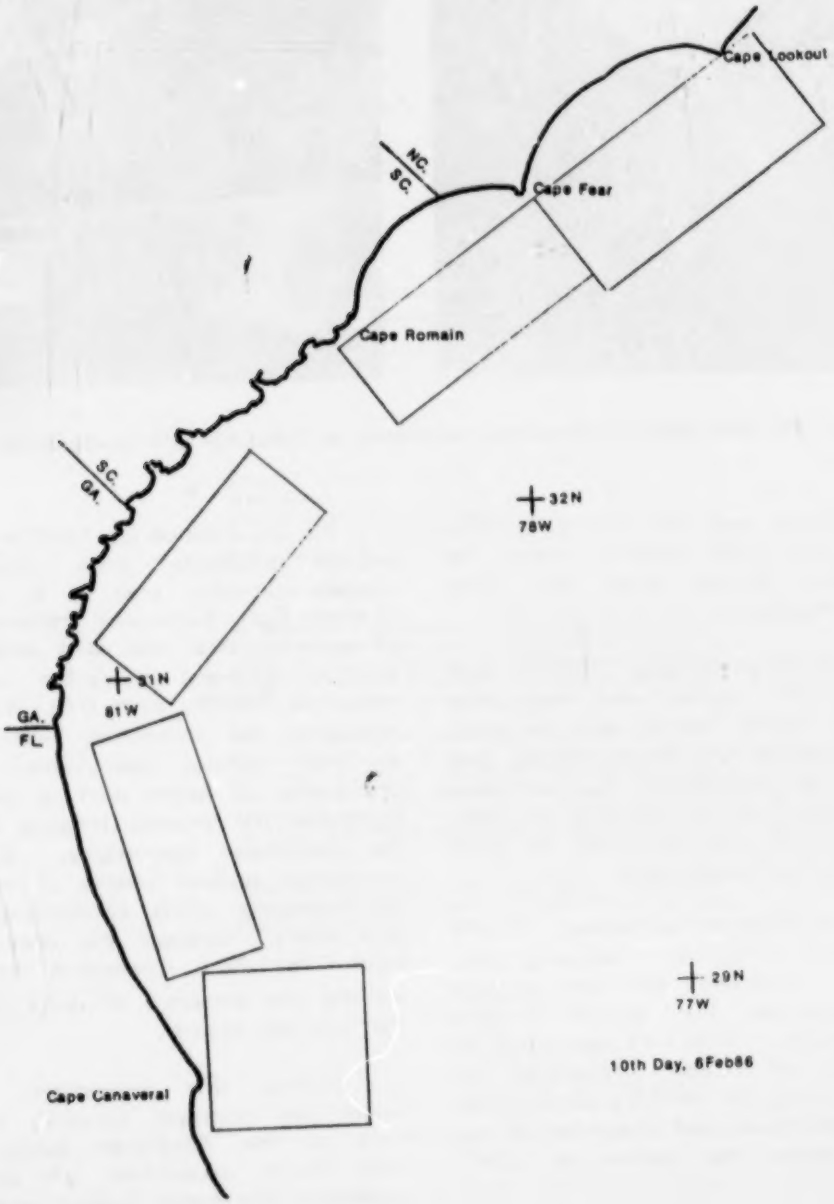
commitments of the Naval vessels attached to the task force, additional Coast Guard assets were directed to recovery operations on 02 February. BEAR, HARRIET LANE, and CHEROKEE steamed for the area, with BEAR on scene before noon, HARRIET LANE by nightfall, and CHEROKEE on the following day. DALLAS, DAUNTLESS and AUBREY FITCH recovered small to medium-sized debris, including unexploded ordnance, and personal items from the flight deck of the CHALLENGER.



On 03 February, DALLAS transferred evidence from UNDERWOOD, AUBREY FITCH and POINT ROBERTS, detaching them from the recovery operation. UNDERWOOD rendezvoused with F/V JESSIE and transferred a large structural panel via SH-60 helicopter to Patrick AFB. SIMPSON, SAMPSON, DAUNTLESS and patrol boats from Naval Special War Unit Two Four were also detached at 1800R. Aircraft from the 919th SOG, HSL-42, and Det 15 39th ARRW were released at the end of the day's operations. CHEROKEE was on-scene at 1500R, having recovered some evidence while on trackline

search. SWEETGUM also retrieved additional shuttle debris, and returned to Port Canaveral to off-load. DALLAS provided operational control for eleven ships, four boats, and fifteen aircraft this date - the most units to be involved with the task force at any one time.

SWEETGUM was detached early in the morning of 04 February, leaving DALLAS a force of five units, one small boat and seven aircraft. CHEROKEE and BEAR continued to recover debris up to 65 square-feet in size. Navy S-3A's augmented the reduced air component. The air search



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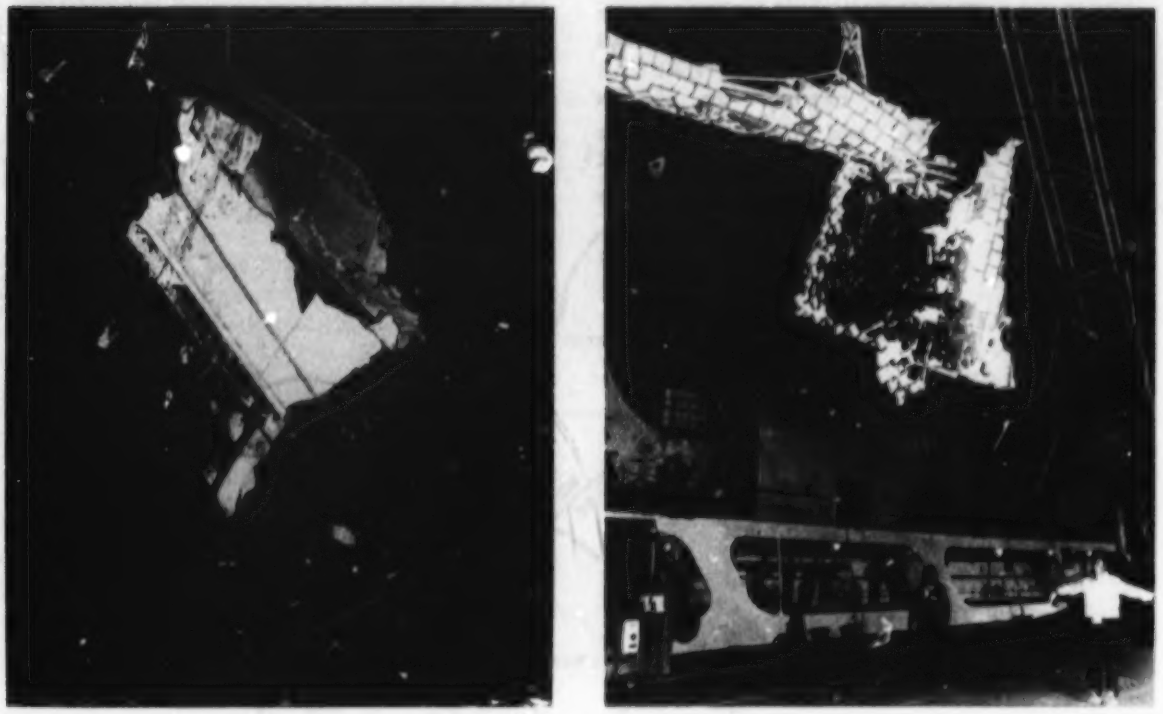

The grim task of evidence collection continues, as DALLAS off-loads more debris

by Coast Guard and Air Force C-130's had gotten into Fifth District waters, as Gulf Stream forces kept the area moving northeasterly.

Early on 05 February, TAMPA was ordered to the scene, and recovered amounts of small debris and personal effects. Weather was deteriorating, and probability of detection by airborne units was reported at 50-75% or less. HARRIET LANE was detached at 1818 to resume normal operations.

After offloading evidence, BEAR was detached early on February 6th. CHEROKEE searched for an orange cylinder reported by aircraft, with negative results. DALLAS returned to the vicinity of Cape Canaveral to maintain security for NASA's underwater recovery operations, and disembarked its HH-52 helicopter for return to CGAS Miami.

On 07 February, TAMPA recovered shuttle evidence from three fishing vessels in the area. A boat from Station Port Canaveral relieved TAMPA of security over the dive area, and the shuttle recovery operation was terminated at 1800R, with DALLAS, as OSC, releasing the remaining units on scene to their normal operations. DALLAS proceeded to home port at last, having extended its already lengthy time away for Caribbean operations. CHEROKEE recovered several pieces of evidence on 08 February, while conducting a track-line search through the area, and off-loaded at Port Canaveral on the 9th, ending the presence of units in the area for surface search.

During this operation, conducted under the constant scrutiny and attention of the American public, a joint task force comprised of over thirty separate commands logged nearly ninety

ship-days, and nearly 700 aircraft-hours without incident or accident. More than 12 tons of space shuttle debris was recovered after searching more than 150,000 square miles of ocean. It was certainly one of the finest examples of inter-service cooperation and coordination in recent memory.

Coast Guard forces remained on call to protect the Navy-managed, undersea operation that was to continue through April. Divers from Atlantic Strike Force augmented resources from the Navy and private sector in the difficult recovery effort from the sea bottom. Broadcasts that warned fishermen and mariners of the damages and disturbances to evidence collection were constantly revised, both to afford separation from sensitive areas, and allow valuable fishing grounds to fall outside the zone of concern once evidence was cleared.

Two pieces of correspondence showed the degree of attention and high regard for Coast Guard performance that the surface operation attained. The letter from Secretary of Transportation Dole and the message from General Herres, DOD Manager for STS Contingency Support contained words of thanks and complimentary appraisal for Coast Guard efforts from 28 January to 7 February 1986.

THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

February 24, 1986

Admiral James S. Gracey
Commandant
United States Coast Guard
Department of Transportation
Washington, D. C. 20593

Dear Jim:

My heartfelt congratulations to you on the excellent performance of the Seventh Coast Guard District during the Challenger search. I wanted you to know how very proud I was throughout the eleven-day recovery mission.

Please express my deep appreciation to the Coast Guardsmen involved for their tireless and very effective efforts from ships, boats and aircraft. My special thanks to Captain Karl Luck and to Lieutenant Junior Grade John Philbin for their outstanding contributions to the mission.

When the Challenger was tragically lost, the U.S. Coast Guard accepted a new challenge and did an exceptional job.

With warm regard,

Sincerely,

Elizabeth

Elizabeth Hanford Dole

U S COAST GUARD
HDQTRS TELECOMMUNICATIONS

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TO COMDT COGARD WASHINGTON DC

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SUBJ: OUTSTANDING COAST GUARD SERVICE TO STS 51L SALVAGE OPERATIONS

1. PLEASE ACCEPT MY SINCERE THANKS FOR THE GREAT EFFORT PUT FORTH BY YOUR FORCES DURING THE SHOCKING NATIONAL TRAGEDY THAT OCCURRED WITH THE SPACE SHUTTLE CHALLENGER ON 28 JANUARY.

2. THE EXPEDITIOUS AND PROFESSIONAL RESPONSE FROM THE COAST GUARD CENTER IN MIAMI, THE FOLLOW-ON SUPPORT OF YOUR CUTTER AND PATROL BOAT FORCES AND YOUR FLYING FORCES WAS FAR BEYOND EXPECTATION. ALSO, THE COAST GUARD CONTROL CENTER THAT WAS RAPIDLY SET UP IN THE RANGE CONTROL CENTER AT CAPE CANAVERAL AIR FORCE STATION ORCHESTRATED THE COORDINATION BETWEEN SURFACE AND FLYING SUPPORT UNITS IN A HIGHLY PROFESSIONAL MANNER OF WHICH YOU CAN BE JUSTIFIABLY PROUD.

3. AGAIN, I COMPLIMENT YOU ON THE EXTRAORDINARY READINESS THAT YOUR SERVICE HAS DEMONSTRATED AND ON THE OUTSTANDING MANNER IN WHICH THEY CARRIED OUT THIS CRITICAL AND DIFFICULT TASK. THE CONTRIBUTIONS OF THE MEN AND WOMEN OF THE COAST GUARD HAVE PLAYED A VITAL ROLE IN THE EFFORT TO RESTORE THE STS PROGRAM TO ITS OPERATIONAL ROLE. SIGNED: GENERAL ROBERT T. HERRES.
ST

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THE LIFE RING AND DISTRESS LIGHT

By: BM1 Stephen M. Ryan

COXSWAIN 'C' SCHOOL, YORKTOWN, VA.

When using the life ring in a man overboard situation or in marking datum of a floating object, the distress light must be attached to it day or night. The reason for this is that the distress light has a dual purpose. The first being the obvious; it illuminates the datum at night. The second is that the distress light creates drag for the ring. This is equally important for marking datum due to the fact that the ring alone is greatly affected if any surface winds are present. Not only is it likely that the ring will drift more rapidly than a man floating in the water, it is also conceivable that they could drift in different directions.

After conducting several tests comparing different methods of marking

datum including life rings with distress lights attached, life rings without distress lights attached and fenders, it was obvious that the most accurate was the life ring with the distress light attached. After approximately 15 minutes there was as much as 500 yards difference between the life ring with the distress light attached and the life ring without the distress light.

A situation where this would be crucial is a man overboard. A man has fallen overboard and is not able to be located. The vessel commences a V5 search pattern using the life ring as datum. Under ideal conditions, the maximum track spacing is 300 yards when looking for a person in the water, in accordance with recent changes to the SAR Manual instituted by COMDT-NOTE 16130. On the third leg of the search, you steer towards datum to correct for the drift. If the surface winds are of any significance, the ring could have traveled hundreds of yards, making the search for a shipmate less and less accurate each time the vessel corrects for datum. With the distress light attached, the probability of detection is greatly increased.

Many stations disconnect the distress light on their boats during the day and hook it back up at night. The Coxwain "C" School staff recommends that the distress light be left attached at all times so that it is not forgotten in the event of a man overboard.

RESCUE AND SURVIVAL SYSTEMS NOTES

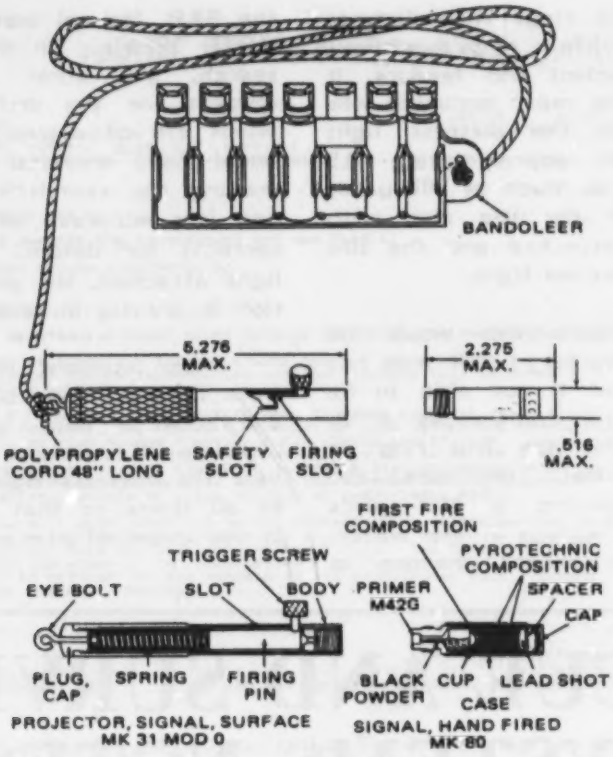
By: CWO Steve Seybold, G-OSR-2

PART 1 PYROTECHNICS

Personal Emergency Distress Signals

Change 5 to the Rescue and Survival Systems Manual (COMDTINST M10470.10A) included the requirement for all crew members to carry the contents of the Boat Crew Signal Kit while underway. By now, all units should have made amends to ensure this is done. By far the most popular method is to tether the components to the PFD worn...be it a Type III vest or an anti-exposure coverall. So much for reiterating the past.

How often have you, as a CO/OIC, required your people to familiarize themselves with the pyrotechnic signaling devices they may someday have to depend upon? Hopefully, the following will only jog the memory of everyone involved. If you happen to learn something new, well, that's O.K. too.



MK 79 MOD 0 Illumination Signal Kit

MK 79 MOD 0 Illumination Signal Kit

This kit is designed to be used by personnel as a distress signaling device. The kit contains seven signals, mounted in a plastic bandolier, a projector, and an instruction sheet. It is small and light in weight so it may be carried in pockets of vests, anti-exposure coveralls, flight suits, or on a raft. A projector (designated a MK 31 MOD 0, Projector, Signal, Surface) aims and fires the signals. Each signal (designated a MK 80 MOD 0, Signal, Hand Fired) contains a red pyrotechnic star. On activation, this star is propelled to a height of from 250 to 650 feet. Each signal burns for a minimum of 4 1/2 seconds.

The device is operated by release of the firing pin which strikes the percussion primer in the base of the signal. The primer ignites a black-powder expelling charge which ignites the first-fire composition of the star and propels the star to the desired altitude.

To operate the MK 79 MOD 0 Signal Kit proceed as follows:

1) Remove the bandolier, signals, and projector from the envelope.

2) Cock the firing pin by moving the trigger screw to the bottom of the vertical slot and slipping it to the right so

it catches at the top of the angular safety slot.

3) Bend the protective plastic tab of the bandolier away from the signal to allow attachment of the projector. The plastic tabs protect the percussion primer from being struck accidentally and should be kept intact until just before loading the signal into the projector.

4) Mate the projector with the signal and rotate the projector clockwise until the signal is seated.

5) Hold the projector overhead with your arm fully extended. The projector should be pointed at a slight angle away from your body.

6) Firmly grip the projector and fire the signal by slipping the trigger screw to the left out of the safety slot and into the firing slot. Be sure to do this in one continuous motion so that your thumb does not interfere with the forward motion of the trigger screw.

7) If the signal fails to fire, try again to fire it by depressing the trigger screw to the bottom of the firing slot with your thumb and releasing it quickly.

8) Unscrew the spent signal case or signal that has failed to fire. Discard it by throwing the case overboard.

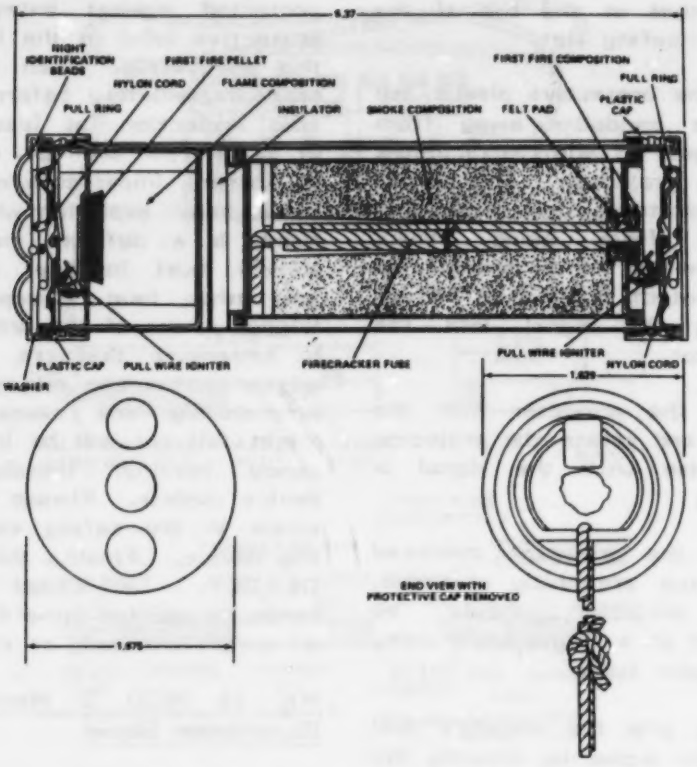
9) To fire another signal, repeat the preceding steps.

Several safety precautions must be followed when using the Signal Kit. First, the percussion primers must be protected against being struck. The protective tabs on the bandolier will do this adequately. Wait to load a signal until immediately before use. A periodic inspection (at least once a year) of signals for damage, dents, corrosion, or other imperfections which might result in an explosion when the signal is fired, is a definite must. Naturally, signals must be kept away from fire and other heat sources. Check the trigger screw of the projector frequently to ensure that it's tight. A loose trigger screw can release the firing pin prematurely and cause injury, or it might fall out and be lost during emergency loading, thereby making the device useless. Always keep the trigger screw in the safety slot when loading the device. Finally, this device can be DEADLY. A loaded projector must never be pointed toward other personnel or toward the body of the user.

MK 13 MOD 0 Marine Smoke and Illumination Signal

This pyrotechnic distress signal is used for either day or night signaling, as appropriate, by personnel on land or sea. Its light weight and size also permit it to be carried under the same conditions as the MK 79 MOD 0. It emits orange smoke for day use and red flame for night use. Burning time for each end of the flare is approximately 20 seconds.

Both ends of the flare are fitted with a protective plastic cap which aids in identification of the flare ends. The cap on the night (flame) end is molded so that there are three prominent protrusions or beads across its face. Some signals were manufactured without a plastic cap but the night end may be identified by touch. Protrusions or beads exist around the flange on the tubular portion of the end cap. The face of the cap and flange of the flare at the day (smoke) end is smooth. A label, adhered to the outer surface of the flare, further identifies the smoke



MK 13 MOD 0 Marine Smoke and Illumination Signal

and flame ends and provides precise instructions for use. Beneath each plastic end cap is a pull ring to which a nylon cord or lanyard is tied. A large washer on the cord at the flame end provides additional identification in darkness.

The pull ring at each end is attached to a pull strip seal which, in turn, is attached to a friction wire that extends inward through a pull wire igniter cup containing ignition composition. A sharp, quick pull on the pull ring causes the friction wire, which is attached to the pull strip seal, to move through the ignition cup and ignite the flare or smoke mixture depending which type of display is desired.

Once you have chosen the type of display you desire - smoke for day or flame for night - the flare may be ignited by performing the following steps:

1) Remove the paper or plastic cap from the end to be ignited.

2) Flip the pull ring over the signal's rim.

3) Push the pull ring downward to break the seal. Be careful not to break the seal prior to ignition. Should water reach the ignition cup, the flare may not ignite. If the seal doesn't break, continue to push

the ring downward until it bends against the case of the flare. Flip the bent ring back to its original position and use it as a lever to break the seal. Be careful not to twist the pull ring in an effort to break the seal. Twisting may tear the ring loose at the solder joint and leave the flare useless.

4) After the seal is broken, ignite the flare with a quick pull on the ring. Make sure the firing end of the flare is not pointed toward your face or body.

5) Make sure you hold the signal at arm's length and at an angle of about 45° from the horizontal to prevent burns from the hot drippings.

6) If the smoke end of the flare flames at sea, douse the signal in water for a moment; if on land, place the flaming end of the flare against the ground momentarily. The smoke will resume after immersion or smothering on the ground.

7) After you use one end, douse the signal in water to cool; if on land, place the signal on the ground to cool. Save the signal for use of the other end.

8) When the signal is used on land and the smoke end is ignited, the outer case may reach a temperature that makes the flare uncomfortable to hold. Should this condition arise, the signal may be dropped to the ground without destroying its effectiveness.

It is important to remember when handling the MK 13 MOD 0 that under no circumstances shall both ends of this signal be ignited at the same time

In this issue we have covered the Coast Guard's two most widely carried personal signaling devices...the MK 79 MOD 0 Illumination Signal Kit and the MK 13 MOD 0 Marine Smoke and Illumination Signal. You, as part of an air, boat, ship, or boarding party crew should be intimately familiar with the procedures used to operate these devices in a safe manner. Further information pertaining to safety and operating procedures may be found in COMDTINST M10470.10A (Rescue and Survival Systems Manual), COMDTINST M16114.5 (Boat Crew Seamanship Manual), COMDTINST M8000.2 (Ordnance Manual), and NAVSEA SW050-AB-MMA-010 (Pyrotechnic, Screening, Marking , and Countermeasure Devices). Don't be afraid to break-out these manuals once in a while and review them. Your life may depend upon your knowledge.

In Part 2 (the next issue) we will review and examine other pyrotechnic devices used for marking and illumination. In particular, the M127A1 Ground Illumination Signal, the MK 25 MOD 3 and MK 58 MOD 0 Marine Location Markers.

THE CASE OF THE MISSING SAR TAPE

By: LT M. Eric Reeves, G-LCL

When a search and rescue case has come to an end, a legal case may be about to begin. I would like to warn you of one of the shoals upon which we nearly went aground in such a case. This was Smith v. United States, decided in the District Court of South Carolina on 28 October 1985. It was an action for $1,500,000.00 arising out of the loss of the F/V EAGLE II and the death of all three persons onboard at Winyah Bay, South Carolina, on 14 February 1983.

At approximately 1645 on 13 February 1983, the EAGLE II called Coast Guard Station Georgetown, South Carolina, on Channel 16, VHF-FM, and reported that her anchor line was fouled in her rudder. She was then approximately 8.5 NM SSE of the Winyah Bay Entrance Buoy. (Winyah Bay is the harbor for Georgetown, which is 14 miles inside the Bay Entrance.) Seas were 10-14 feet, winds were N/NE at 20-30 knots, and visibility was 1-3 NM. Station Georgetown advised her to deploy an auxiliary anchor, attempted to arrange assistance by another fishing vessel in the area, and put the EAGLE II on a regular communications schedule. At 1804 the EAGLE II reported that she had corrected the problem and was proceeding under her own power to Georgetown. But regular communications were continued, in longer intervals, with the EAGLE II reporting that all was well at 2000 and 0000.

During this last radio conversation at 0000 14 February 1983, the Station watchstander recommended that the EAGLE II hold off outside Winyah Bay until conditions improved. (The Coast Pilot notes, about Winyah Bay, that "The entrance is not safe for small craft except in favorable weather. Heavy tide rips prevail near the ends of the jetties, and heavy seas run in moderate weather. The south jetty is visible only at low water." See Coast Pilot #6, Chapter 6, "Winyah Bay.") The operator said that he had been in Winyah Bay before, that he was going to give it a try, and that he wanted to know what course to steer. The watchstander gave him the course from the Entrance Buoy, but told him that this was an unreliable method and that it would be better to rely on the range, which the operator of the EAGLE II said he could see.

At approximately 0025 14 February 1983 the EAGLE II reported that she had hit the South Jetty, and that she was taking on water. CG 41428 was immediately dispatched from Station Georgetown, but was forced to turn back at approximately 0110 when she encountered 12-14 foot seas in the Entrance Channel. The CG 41428 was able to see the EAGLE II, and it appeared that she was still afloat at 0050. At 0035, however, the operator had already reported that he was preparing to abandon ship. At 0130,

Group Charleston diverted USCGC CAPE KNOX from a considerable distance away, and tried without success to find a helicopter that could fly. At 0630 the CG 41428 tried again, and was able to make it out. She was joined by an Air Force helicopter at 0815. But they found only wreckage and bodies. All three persons from the EAGLE II had been in the water for some time and died of hypothermia.

The Legal Case

The Plaintiffs (Smith and the others bringing the action against the United States) had a lot of difficulty in their attempt to show some legal fault on our part. We had done what we could to help the EAGLE II. It turned out that what we could do was very little. But we had in no way worsened her situation, and there was no indication of any negligence on our part. Things had not worked out well. But it was the decision of the operator of the EAGLE II to come into Winyah Bay, against our advice, which brought about her doom.

The Plaintiffs received a boost in their action, however, from an embarrassing slip on our part. We had two audio tapes of the radio conversations between the watchstander and the operator, one which ran up until 0000 14 February 1983, and another which ran afterwards. The critical conversation about coming into Winyah Bay was recorded, if at all, on the second tape. This second tape was retained for some unknown period of time. Sometime after various discussions about the case took place, and after someone at the Group had promised to the Plaintiffs that we could save "the tape," we lost the second tape. To this day we do not know what happened to it. The most likely possibility is that it was inadvertently re-used under the assumption that the first tape, which was properly marked and put aside, was the whole of "the tape." It appears that whatever had been recorded on the second tape was unintelligible anyway, as one or more persons had attempted to glean something from it without success before it was lost. This may well be why it was not properly identified as a piece of evidence to be preserved.

Nevertheless, this "missing tape" played about the same part in the Smith litigation as the "18 minute gap" played in Watergate. After having a trial on the merits and deciding as a matter of fact that there was no evidence of negligence on the part of the Coast Guard, the District Court continued proceedings for the special purpose of deciding whether or not we should be legally presumed to have been negligent solely because of our "destruction of evidence." After much effort we managed to convince the Court either that the loss of the tape was not an intentional destruction of evidence, or that there was little likelihood of there ever having been real evidence of negligence on the tape. (As we often do, we gave the court more than one reason for finding in our favor.) Without saying why, the Court eventually found for us. (It must have liked one of the reasons we gave.) But it was a close call.

The Problem of Tapes

We are finding that the radio tapes made by the Coast Guard in RCC's and VTS's, which were of course not designed primarily for that purpose, are becoming more and more important in litigation involving the United States. Cases very much like Smith have come along before. And then there is the flip side. We are often in the position of wishing that we had tapes for our own use as evidence, in order to prove that our actions were reasonable. (The same problems have also arisen in criminal cases, in which druggies that we busted have come close to walking because we failed to save the tapes of the radio transmissions leading up to

the seizures.)

As far as we can tell at this point (in what, to use a technical legal term, is a "squishy" area of the law) there is no general obligation to preserve evidence that might be useful in litigation. The obligation to preserve evidence arises when it is asked for. Once they ask for it, you have to save it. (Or we have to come up with a good reason why you didn't.) But a court might easily go further than that in a case in which a piece of evidence is obviously critical to upcoming litigation before anyone even mentions it.

What to do? What is usually done is something which seems perfectly reasonable and practical. The only problem with it is that it doesn't work. The OPS officer or the chief says something like "We have to save that tape, so I'll just put in on the shelf behind my desk here where it'll be nice and safe." But then the OPS officer or the chief goes off duty, or on leave, or off to another unit, and the tape turns up missing when someone comes looking for it later. "Oh, we thought they had a copy of that." (They may have. But if we can't prove it, it doesn't do us any good.) "Oh, nobody told me we weren't supposed to use that tape." (Just as in everything else, there's always that 15% that don't get the word.) "Oh, that tape? That was almost a year ago!" (It's a sad fact that I have yet to get used to myself, but litigation is measured in years, not months.) It happens over and over again.

The only sure way to preserve something is to reproduce it. Redundancy is the way to ensure survival (and to emphasize a point, which is why I'm being redundant here). That's why they put three sets of the same fire control radar on a guided missile frigate. The same approach is useful for survival in the fray of litigation.

The thing to do is to make a number of copies of the relevant transmission, give anyone who wants it a chance to make sure that what you copied is what they want, then put that very expensive roll of 8-track tape back on the line where it belongs. Please, however, make the copies through some form of electronic connection. Standing the cassette recorder in front of the speaker of the 8-track machine produces a product that strains both hearing and sanity.

And, as a final suggestion, give your copies to one of us, your lawyers. Then if it turns out to be missing we can have all the joy of coming up with an explanation ourselves.

AIRCRAFT DITCHES 500 NM WEST OF SAN FRANCISCO

By: LT C.C. Colvin

The afternoon of 9 February 1986 was a busy one for the combined PAC-AREA/D12 RCC. LT Rob PARKER and QM1 Grant BELL were busy with several cases when Oakland Air Route Traffic Control Center (OARTCC) called at 1606U. "I have a small aircraft inbound to SFO declaring an in flight emergency. He does not think that he has enough fuel to make it in. I'm getting more information now."

On board N5300Y, a 1963 twin-engine, PIPER AZTEC, Pilot Aulden Badenhop and passenger Jim Yoeger were becoming more and more concerned with their situation. They had departed Hawaii that morning with 15.5 hours of fuel onboard. Their plane had been up a little more than 9 hours on the 14 hour flight, and the fuel gauge was registering close to empty. Unless their fuel gauge was broken, it was becoming more and more apparent that they would have to ditch. Frantically, they tried to track down the source of the problem. At 1632U, N5300Y reported having only 20 minutes worth of fuel left. Their loran was not working properly and they were not certain of their position, but they estimated it to be somewhere about 600 miles west of San Francisco.

Back in the RCC, the controllers were busy coordinating the rescue. A Navy P-3 transiting from the west coast to Hawaii diverted to assist. The aircraft commander, LCDR John Tindell, was unable to DF, but did establish contact with the distressed plane. Meanwhile, the Navy DF net was activated resulting in a "good fix" with 2 possible positions, about fifty miles apart. A FALCON jet aircraft, CG2127 with LCDR SLACK as Aircraft Commander, was scrambled from Coast Guard Air Station Sacramento and was speeding westbound. Air Station Sacramento recalled a crew for a C-130. AMVER was consulted to see if any ships might be in the vicinity of the ditching. The Piper Aztec was directed to energize its ELT but SARSAT was unable to fix its position and no high flyers were able to monitor the distress beacon.

At 1721U Pilot Aulden Badenhop reported that his plane was "out of gas" and ditching. His position was approximately 500 NM west of San Francisco. There were no aircraft or ships in the area. Before ditching, Badenhop reported that they had a yellow liferaft and flares on board. The Navy P-3 had not yet located N5300Y when it went down and could now assist only in saying "good luck gentlemen!"

Back at RCC it was becoming apparent that a major search would probably be required at daylight. The P-3 and FALCON would soon have to depart scene due to low fuel. The C-130 that had been recalled from

Sacramento would not arrive on scene until an hour-and-a-half later. Even so, the odds of locating the aircraft or injured people at night were very slim. USCGC MIDGETT, a 378 homeported in Alameda, CA was put in B-2. The 129th ARRG out of Moffett Field, CA and the 41st ARRS out of McClellan AFB, Sacramento, CA offered to provide two C-130's and a long range air-refuelable helicopter for the search. Unless CG 1703, the C-130 departing Air Station Sacramento could locate a flare, there was little more that could be done until daylight. Weather on scene was reported to be: scattered clouds, visibility 30 NW, wind southeast at 10 kts, with 2-3 ft. seas. A major search was being planned for the following morning.

At 2000U, both the P-3 and FALCON departed scene without having located the ditched aircraft. SARSAT still had not monitored an ELT in the area. At 2035U, CG 1703 arrived on scene and commenced a flare search.

Somewhere below CG 1703, Badenhop and Yoeger were safely afloat in their liferaft. Badenhop had successfully ditched the aircraft in the calm seas. They quickly abandoned into the raft and watched as the plane sank. Their biggest problem was the cold night air. The water temperature was about 53 degrees. It had been hours since they had ditched and they were both beginning to wonder if they would be rescued. About an hour after midnight, they saw the lights of an aircraft in the distance.

Aboard CG 1703, Aircraft Commander LCDR OLSZENWSKI had his crew maintaining a sharp lookout. Suddenly, at 0100U several red flares lit up the night sky in the distance. CG 1703 located the liferaft at position 36-01N, 132-59W (about 50 miles from the estimated splash point based on the DF fixes). In the raft, Badenhop and Yoeger knew that they had been spotted. The C-130 circled overhead and dropped flares to mark the position. A hand held radio attached to a strobe light was also dropped but could not be recovered by the men in the raft.

At 0255U, CG 1703 located the merchant vessel EVERGOOD, 24 Nautical miles away. The EVERGOOD, a Taiwanese registered vessel, was bound for Long Beach out of Tokyo. EVERGOOD diverted to assist, increasing speed to 18 knots. At 0339U, CG 1703 departed scene after re-marking it with flares and strobe lights. The EVERGOOD was less than an hour away. At 0520U the EVERGOOD reported that they had both survivors onboard and that they were both in good condition. The only medical attention needed was "some tea and hot showers." The EVERGOOD arrived in Long Beach two nights later, where two tardy but thankful passengers departed. It was a classic rescue for all involved.

THE BOS'N LOCKER

By: BMCM Mike Calhoun, G-OCU

We were clearing the sea buoy, standing out to sea. The old bos'n turned to me and said, "I've passed more sea buoys than you have telephone poles. "Well Bos'n," said I, "You're quite a guy, but what about new sea buoys today? What about IALA and yellow buoys, and green aids replacing the old familiar black ones? A lot has changed in seamanship, and so have the aids to navigation which mark our way."

The Coast Guard began modifying our aid to navigation system in the spring of 1983, and we expect to complete the conversion by 1989. This work is being done to honor the agreement we and most of the world's maritime nations have with the International Association of Lighthouse Authorities (IALA). This agreement was signed in April 1982. Many years of work went into this project with the express purpose of making the world's waterways safer and more uniform. The U.S. system has changed only slightly. Ours is still a lateral buoyage system, meaning that, for the most part, our aids mark the sides or limits of channels. Although changes to the system are few, good seaman must become thoroughly familiar with these changes, and what the new aids mean.

Now, returning to the Bos'n's sea buoy. Well, actually, it's called a Safe Water buoy. Like the old mid-channel buoys, it indicates to the mariner that there is good water all around the aid. They are often used to help the mariner make landfall, or direct him to a channel. Unlike the mid-channel buoys, which were black and white striped, these aids are now red and white striped. If lighted they will show a white, Mo(A) characteristic (dot-dash), and will exhibit a spherical top mark to help identify it during daylight hours. Unlighted Safe Water buoys may be spherical in shape, or if non-spherical, will carry a top mark. Safe Water daymarks are octagonal (eight-sided) in shape and are half white and half red in the vertical plane. Both buoys and daymarks may be lettered, but are never numbered as numbers are reserved for the lateral (side) marking of channels.

Lateral aids marking the sides of channels have changed also. Port hand aids are now green with green lights. Black is gone, and so are the confusing white lights. Fortunately, our "red, right, returning" aids are still the same. We had to fight hard for this because many of the world's maritime nations

use red to mark the port side of channels. Because of this, the IALA Maritime Buoyage System actually consists of two parts. Region A, which is mainly European and Eastern Hemisphere waters, is marked with red on the port side of channels. Region B, of which the U.S. (except for a small portion of the South Pacific) and other Western Hemisphere nations are a part, has retained red on the right side. These red buoys and daymarks will only exhibit red lights from now on. White is now used only for aids which have no lateral significance. The only exception to this rule is the use of white lights on crossing aids in the Western Rivers.

Preferred Channel aids are similar to the old junction and bifurcation buoys. They are horizontally-banded red and green, with the color of the top band signifying which channel is preferred. If the top band is green, the buoy may be considered a green buoy; if the top band is red, treat it like a red one. If lighted, these aids will show a light the same color as the top band, again to assist the mariner in determining which is the preferred channel. The light rhythm will be a composite 2 & 1.

Special marks are probably the biggest change to our old system. Years ago, we had a number of different aids to signify various special areas or activities, such as dredging buoys, fish net buoys, quarantine buoys, etc. Now, we have replaced all of these with one mark—the Special mark. Notice that I'm not calling it an aid. This mark is not intended to aid the mariner in determining his position; it is merely calling his attention to a special area or feature that will be referred to on the charts of the area, or some other nautical document. These marks are used to call attention to anchorage areas, traffic separation areas, spoil grounds and the like. These marks are always yellow, and if lighted will show a yellow light. The key is the new color. If you see yellow, consult your charts or Coast Pilot to determine what's going on. Like other non-lateral marks, Special marks may be lettered, but are never numbered.

White and orange Information and Regulatory marks, with the various geometric markings and lettered warnings, have not changed, but may be used more often in our new system. Information and Regulatory marks offer the mariner more information than Special marks, so it is usually not necessary to refer to charts or pubs when you run across them.

As you can see, Bos'n, things have changed somewhat. A quick review of the Boat Seamanship Manual's section on our new aids to navigation system would benefit you and the old chiefs just as much as it would these kids that are qualifying as new cox'ns. Maybe some unit training would be in order. The real seamen recognize how important it is to keep current in their ever-changing field, don't they Bos'n?

SAR –

What Does It Stand For?

By: G.M. Chaskes, G-BAU-1

So, you have been trained to think SAR always stands for Search and Rescue. How about Sea Air Rescue? That's the way some Auxiliarists go about SAR. There are at least a dozen Coast Guard Auxiliarists who are qualified as both Auxiliary Coxswains and as aircraft pilots.

The only woman in this elite group, Abigail Wagg of Oakland, California, is representative of the all-consummate Auxiliarists — concerned with the safety of fellow boaters. She not only flies and boats — she is active in Auxiliary public education, public affairs and is a Flotilla Commander. She describes her time in the air as riding a magic carpet and waxes eloquent about touching clouds and soaring over red-tailed hawks. But this poetic pilot — in the air or on the water — has a very down-to-earth motivation — increasing safety and keeping the pleasure in pleasure boating. A typical Auxiliarist — always ready to carry out SAR — which by any name saves lives.

Editor's Note: The following article, reprinted with permission from the author, brings out an important point: Despite advances in technology and electronic aids used in SAR, and our increasing reliance upon this equipment, we must remember that they are fallible. They have not diminished the importance of the requirement to post a proper lookout at all times. Had this basic rule of seamanship been observed, this unlucky skipper probably would have been picked up sooner and suffered less.

SAILOR SURVIVES CAPSIZE – BARELY

By: Mr. James C. Borg

Reprinted with permission from his article in SOUNDINGS

Carl Nicholas Dunn stood on his capsized trimaran and fired a flare at the approaching freighter.

He was almost disappointed, he recalls. His rescue would be almost "too easy," coming after only a day adrift in the eastern Pacific.

He fired four more flares.

But the freighter, about a mile away at its closest point, kept going, and a heavy feeling of dread washed over the sailor. With only one flare left, he watched the ship disappear over the horizon.

I was more than heartbroken," he said.

"Nick" Dunn, a 40-year-old commercial seaplane pilot from Key West, Fla., was sailing his 26-foot L'Escargot from the Pacific Coast to Florida when it capsized about 80 miles off the coast of Costa Rica on Jan. 22. His ordeal ended six days later, when a Japanese automobile carrier rescued him under almost miraculous circumstances.

I'm a very lucky man," Dunn admitted after the ship, the Venus Diamond, dropped him off Feb. 6 in Honolulu.

His case also provided a dramatic reminder that there are geographical limitations to the Search and Rescue Satellite (SARSAT) system. Dunn was carrying an Emergency Position-Indicating Radio Beacon (EPIRB), but the Coast Guard concluded that the transmitter either wasn't working or was unable to span the 2,000-nautical-mile distance to the nearest ground receiver, at Scott Air Force Base, Ill.

Dunn was sailing at night through

bad weather toward the Panama Canal when his boat collided with what he believes to be a submerged log.

He was thrown naked into the rough seas, but managed to get his 5-foot rubber dinghy into the water. The trimaran did not sink, but turned over, and Dunn tied his raft to it.

By swimming underwater through the submerged hatch and groping around the cabin, he salvaged a half-gallon container of water, four oranges and a can of chili.

One of Dunn's contact lenses had washed out when he was thrown overboard. And in fear of losing the other, he kept that eye closed, relying on his poor 20/200 vision in the other to spot supplies.

Another ship appeared, about 4 to 5 miles away, but Dunn chose not to risk his last flare.

At night, it was very cold," he said in an interview. "After the first night, I realized I would die of exposure if I didn't get my survival gear."

A day-long effort was required to retrieve his foul-weather clothing, stowed in a hard-to-get-to locker with a stuck latch.

The next few nights might have been bearable but for the heavy seas and 20-knot winds. "Every half hour or so, a wave would break over the raft and fill it with water, and I'd have to bail with half of a canister I had my flares in," he said. "Uncontrollable shivering."

In a recurring dream, he said, his boat would be anchored in a quiet cove near a Mexican village. The owner of the hotel would come down and invite him to stay in one warm and dry hotel room.

"I'd get this great sense of well-being, and then I'd wake up and I'd be lying in six inches of cold water."

His EPIRB went dead on the fourth day, twice its expected life.

Coast Guard LT(jg) Terrence Walsh of the Honolulu Joint Rescue Coordination Center said the EPIRB's antenna may have been damaged in the capsizing. In any case, Walsh said, that part of the Pacific is one of the "fringe areas" of the SARSAT system.

Even if the VHF signal had been picked up by the network of three Soviet and one U.S. polar-orbiting satellites, Dunn was beyond the reliable 1,400-nautical-mile radius from the ground station, said Walsh.

In addition to Scott, there are receivers at Kodiak, Alaska; Point Reyes, Calif.; Ottawa, Ontario; Toulouse, France; and up to three of uncertain reliability in the Soviet Union. In areas uncovered by SARSAT, boaters in distress must rely on passing aircraft to pick up EPIRB signals.

If any aircraft had passed near Dunn, the heavy swells may have interrupted the signal, Walsh said.

Dunn had sunscreen and lip-screen, so he did not burn, but sores developed on his hands and feet from saltwater exposure.

The appearance of sea turtles at first delighted him. "I welcomed them for company, but they started to bite and I decided a little hole in the raft and it'd ruin my day."

He hit at their eyes with broken oars and they went away.

A 5-foot shark visited one night, but also went away.

As morning broke the sixth day, Dunn said, he decided to kill himself rather than spend another cold night in the open raft. "The idea was growing in me that if I was going to be out here for 30, 40 days, what a lousy way to go. And maybe I should find a way to end it quick."

But as the day grew warm, he said, he reconsidered.

The captain of the Venus Diamond, Dunn was told later, routinely changed course every noon to stay on a great-circle route over long distances. On Jan. 27, for some reason the captain could not explain, he changed direction at midnight.

Dunn spotted the ship the next day when it was about 3 miles away, heading directly for him. With a mirror, he flashed sunlight at it.

"I was all choked up," he recalled. "I was going to be saved. Then I noticed she hadn't slowed down and I thought, 'Oh, shit, she doesn't see me.' I dove for the sail bag and got my flare gun and shot almost directly up at the bridge. I was in quite an agitated state."

The flare didn't fire. Dunn realized he had not cocked the gun, quickly he did so and pulled the trigger again. The flare shot almost vertically at the bridge.

Seconds later, the ship's bow wake overturned the raft and threw Dunn into the water. The open sail bag donated its contents to the depths.

On the ship's bridge, Dunn heard later, one of the officers happened to glance up at that moment from a navigational chore. He saw something flash by the window.

"If I'd have fired the first time, he wouldn't have seen it," Dunn said.

Dunn righted the dinghy and watched the ship grow distant.

"I was staring at it, trying to concentrate my mental powers on it," he said. "When I realized she was really making a turn, I probably filled up the boat with water worse than the waves cracking over the top." He was referring to his tears.

A 10-foot hammerhead was circling when they picked him up.

RHI IDENTIFICATION MARKINGS

Submitted by: QMC Girard, CCGD3 (osr)

Editor's Note: As this article points out, there are no official guidelines published concerning proper markings for the RHI. This article is published for informational purposes only, and should not be construed as directive in nature. We think the Third District did a fine job using existing publications in developing their own guidelines.

The advent of the Rigid Hull Inflatable Boat (RHI) has raised several questions about standard markings for the boat. What markings are necessary? Where should the markings be placed? What color and size should they be? What about the Coast Guard logo...that infamous racing stripe and emblem? While there are no standard

markings for RHIs recommended by the Commandant, the Third Coast Guard District has developed a system for marking an RHI based on COMDTINST M10360.3, Coatings and Color Manual, and Coast Guard Plan No. FL-2804-4, Markings for Boats Under 30'. The methods for marking described below is taken from their Instruction and may be adapted for your own use.

1. The words "COAST GUARD" should be 4-inch letters of a rubber material, white in color for orange/black pontoons, black in color for grey pontoons. The words should be positioned on both outboard sides of the pontoon just above the strakes as indicated in Coast Guard Plan No. FL-2804-4.

2. Hull numbers should be the same size, material, and color as above, positioned on both forward bows above the strakes (if any). For RHIs assigned to cutters, the identification markings should consist of an abbreviation of the cutter's name followed by a numeral. These markings should be placed on the forward bow in a manner similar to that used on shipboard MSBs. The Coatings and Color Manual describes this.

3. RHIs with a large transom, such as the I/O versions, should have the hull number placed on the stern using 4-inch self adhesive numbers. This is not practical for outboard versions nor necessary for shipboard RHIs.

4. Again, for the I/O versions, the station name should be placed, as specified in the Coatings and Color Manual 2 inches under the hull number using 3-inch self-adhesive letters. This too, is not practical on outboard versions nor required for shipboard versions.

5. A rubber Coast Guard stripe and emblem should not be used on the pontoon of any RHI since inflation of the pontoon and normal operations tend to rapidly crack the decals. For RHIs with center consoles visible above the horizontal plane, the stripe and emblem should be placed on both sides of the console as indicated in the Coatings and Color Manual. The stripe and emblem specified for a vessel with a red hull should be used.

There you have it! Again, while no specific standards currently exist for marking of RHIs, this information may be of assistance to those who had questions or who may not have already marked their boats.

Editor's Note: As we all know, the RHI is fast becoming a mainstay in our inventory of ship's boats. We've printed several articles in the past, which expressed ideas on launching the shipboard RHI. The primary purpose of this article is to update the the fleet on experiments being conducted to enhance the shipboard effectiveness of this new, but already extremely popular boat design.

PROTOTYPE 6M DIESEL RHI

By: CDR A.W. Anderson

CO,USCGC DAUNTLESS (WMEC 624)

This unit has had the opportunity to evaluate the prototype Hurricane diesel-powered RHI from 21 September 1985 to the present. We have put the boat through routine boarding evolutions as well as hazardous SAR cases operating in seas 12-20 feet. The sea-keeping ability, handling characteristics, speed, and versatility of this boat can be described in one word - excellent! There are many advantages to having an RHI rather than an MSB. These have already been proven by other units. The advantage of having the Hurricane diesel-powered RHI is the primary consideration of this article.

One of the first design features we enjoyed was the layout of the interior. The engine compartment and the stowage compartment forward of the steering console, provide seating for eight people without seating anyone on the pontoons. The coxswain has a lower back seat that he leans against and the boat engineer stands next to him where he can scan the gauges. For the boat to carry its full capacity of twelve, only two people must be seated on the deck, one of whom would be the boat seaman riding in the bow. This easily accommodates most boarding parties very comfortably. It should be noted that performance and crew comfort are not reduced by having the forward tube deflated. Holes and leaks are inevitable with the work we do and there has been much discussion as to the feasibility of using an RHI with this danger. We have found it to be only an inconvenience. We operated ours as the primary boat with the forward tube deflated and its capability was not reduced. It still proves to be a much drier ride for the crew than the MSB, even at the higher speeds. Recently, we put a ten inch, moon-shaped gash in one of the tubes. It took only two people to remove the pontoons, repair the gash and replace them within 24 hours. The engine is also extremely quiet and allows normal conversation while running at any speed.

From the maintenance standpoint, we have experienced no difficulties in

performing routine maintenance to the boat while underway. The engine compartment is easy to access and the configuration of the engine and components make servicing simple. It has been very reliable and has started every time in temperature ranges from 64-86 degrees. The acceleration and speed does not match that offered by gas-powered outboard motors, however, the top speed is only a few knots less. The safety factor of the diesel propulsion makes the small trade-off worthwhile. We have operated this boat fully loaded many times and it has maintained enough power throughout acceleration.

Further testing of the RHI under MEDEVAC and Rescue and Assistance conditions revealed that the boat is more than adequate. While a stokes litter can only be carried in a MSB by placing it athwartships on the engine cover, removal of the forward seat/stowage box in the diesel RHI, allows the stokes litter to be carried on the forward deck. It can also be carried athwartships on the stowage box in front of the coxswain. Both the P-250 and P-140 pumps, including their associated hoses and support equipment, fit easily into the diesel RHI .

We have found the handling characteristics of the Hurricane RHI to be superb. We have put this boat through demanding conditions including those encountered during the rescue of 40 Haitians in high winds and 20 foot seas. During the rescue, it was necessary to make several approaches on a disabled sailboat to pass life jackets and pull these people off. The boom of the sailboat extended well past the transom and made the approach difficult. The RHI was easy to maneuver alongside and maintain position, which helped ensure that this evolution could be conducted safely. During the space shuttle recovery operation, we operated the boat for extended periods well away from the ship. The sea conditions were not difficult, but this is an excellent example of the reliability and confidence we place in this boat. The spotlight, which is a standard feature on the Hurricane RHI, proved indispensable during this operation. We now plan on putting one on the MSB.

We have made two modifications to the RHI which proved to be very useful: One is the addition of a depth finder. We placed it on the left side of the console, near the steering wheel, on a removable swivel mount, where the coxswain can see it easily. Its low profile keeps it out of the way and its LCD read-out gives the coxswain an accurate picture of the bottom. We have found this extremely useful for operations in the Bahamas. We anticipate its use when entering foreign ports where the charts are not accurate or reliable. The other modification is the addition of a VHF-FM radio. We tested the Motorola MXR-300. With its vehicular adapter, it is entirely waterproof. We mounted the radio and adapter to the left side of the console. It has a speaker which we mounted behind the spray shield on top of the console. The antenna was mounted on the self-righting frame. Thus far, it has worked very well. We have only tested the radio to a range of two miles, but it receives and transmits loud and clear. It has been soaked many times and its watertight integrity has been proven. We believe that both these additions have been necessary to fully utilize the abilities of this boat.

Raising and lowering with the single-point davit system has been a real learning experience. Even in calm seas the boat has the tendency to pivot and swing when it is boomed out over the water or back into the cradle. As a result, we have tried frapping lines from every angle possible in an attempt to stop the swinging. The best method is to get the best forward and after leads possible on both the 01 and main decks. Even this won't stop the boat from pivoting completely but it is the

best method we've found. We have also found that the sea painter does not work as well as with the MSB. With the shallow draft and flat transom, the RHI surges with the seas. We have tried DIW launches and launching at speeds up to six knots. The best way to keep the boat snug alongside the ship is to work at slow speeds or DIW and have the coxswain back down with the outdrive turned into the ship. One feature we are looking for which should improve safety tremendously, is a self-releasing hook. The only one we have located is prohibitively expensive. Any information on this would be very helpful.

We are not only highly satisfied, but greatly appreciate the qualities of the Hurricane diesel-powered RHI and welcome its addition to the fleet.

EMT CORNER

By: CWO3 (PYA) D.L. Osborne

"THE CAPABILITY TO SUSTAIN THE LIFE OF THOSE WHO HAVE BEEN RESCUED IS JUST AS IMPORTANT AS THE SEARCHING FOR AND RESCUING OF SURVIVORS."

National Search and Rescue Manual

We are all aware of the multi-mission nature of the Coast Guard. It requires several different skills and specialties to accomplish these varied tasks. Many Coastguardsmen have assumed the extra responsibility of being an EMT. This is not taken lightly. At any given time in their normal line of duty, they may find themselves with a patient's life in their hands. This article presents some background on the training and responsibilities of a Coast Guard EMT.

First of all, is there a difference between a civilian EMT and a Coast Guard EMT? You bet! Civilian EMTs usually work in pairs and have the back-up of a nearby hospital. Generally, the patient arrives at the hospital emergency room within minutes after the EMT arrives on scene to assist them. Furthermore, this is usually the civilian EMT's full-time job. He receives constant on-the-job training and experience.

The Coast Guard EMT generally responds as the only EMT on scene and (as we are all too familiar) under the worst conditions. Most MEDEVACs occur over three miles from shore, so the patient is under the EMT's care much longer than he would be with his civilian counterpart. Of further consideration, is the Coast Guard's unique field of operation...anywhere from a mountain top, to arctic waters, to a burning freighter.

A real problem for the Coast Guard EMT is that this is not their full time job. Most Coastguardsmen have their hands full just maintaining the skills of their specialty, let alone keeping their EMT skills current.

Another difference is the EMT basic training. For those who were trained at the Coast Guard EMT school, this is a big difference. Most civilian programs are six months (120 hours) long. If you attend the Coast Guard program, you will complete 130 hours of intensive training in only three weeks. Because of the short time, you might say we have lost some quality. As the School Chief, I can proudly say, "Not so!". Our Students receive all the required subjects, including hospital emergency room and ambulance training, use of M.A.S.T (Medical Anti-Shock Trousers), and numerous drills with simulated patients. In addition, specific skills needed for Coast Guard oriented missions, such as in-water rescue techniques, are taught.

The student must pass a total of 220 questions on quizzes and section tests related to the emergency medicine profession. They must also get an 80% score on a comprehensive final exam consisting of 200 questions. A final practical exam, under strict guidelines, must also be successfully completed. Believe me, buckets of sweat are lost during this one.

Upon completion of the course, the student is certified by the Department of Transportation and the State of California. The California State certification is accepted by most other states.

The Coast Guard EMT School is obviously an intensive, difficult course and is not for everyone. Yet the school has an attrition rate of less than 2%. The average final class score is 91%. Many exceptional personal efforts have been recorded, such as:

SK3 Martin J. LADYMAN, USCG Group Grand Isle, LA., graduated with a 98.20 average.

ASM1 John P. BAKER, USCG Air Station Traverse City, MI., graduated with a 98.20 average.

BM3 Judy L. KILLIAN, USCGR, USCG Station Bodega Bay, CA., graduated with a 98.40 average.

Special mention must be made of an outstanding individual who achieved

CWO3 OSBORNE congratulating BM3 Judy L. KILLIAN, USCGR, Station Bodega Bay, California. Graduated with a 98.40 average.

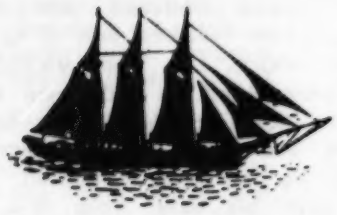
the highest graduating average ever recorded by this school:

BM1 Douglas E. WYATT, USCG, RESTRACEN Yorktown, VA. graduated with a 98.60 average.

Why is the EMT school so successful? It's because of highly motivated students, most of whom are volunteers. They have a real drive to help people and are willing to accept the extra responsibility beyond their normal duties.

Those of you who are considering becoming an EMT, must be prepared for hard work and the responsibility that goes with becoming an EMT. We take our job seriously as instructors and will accept nothing less from our students. If you accept the challenge, you will receive great satisfaction from being a key member in the Coast Guard life-saving team.

Editor's Note: We thought it might be amusing to go back in our history to see what SAR was like in "the Old Guard". First, we'll look at a case that happened 100 years ago, in 1886. The case is the Wreck of the Schooner T.B. Witherspoon off Nantucket Island, Massachusetts. Our source was the Lifesaving Service Report-1886. We think you'll find it interesting reading. We'll also jump forward from there, 50 years, to 1936 and take a look at the "state of the art" equipment of the period. Our source was the Report of the International Lifeboat Conference in Sweden-1936.



THE WRECK OF THE SCHOONER T.B. WITHERSPOON

The seventh fatal wreck of the year was that of the three-masted schooner T.B. Witherspoon, of Camden, Maine, which occurred off the southerly shore of Nantucket Island, Massachusetts, (second District,) on the 20th day of January, 1886, during the memorable storm of that date. It was, with one exception, (that of the Austrian bark Kraljevica,) the most disastrous casualty within the scope of the operations of the Service during the year, seven persons losing their lives. From the report of the officer who was dispatched to the scene to ascertain the facts, it appears the schooner was bound from Surinam, Guiana, to Boston, Massachusetts, with a cargo of sugar and molasses. She had a crew of seven men, and the mate's wife and child were also on board, the latter a boy of five years. Of these nine but two were saved, the mate and one of the seamen. The schooner had scudded before the gale under bare poles for two days prior to midnight of Saturday, the 9th, at which time the wind suddenly shifted to the westward and blew with increased fury, accompanied by snow and sleet. It was a terrible night. A few hours later (Sunday morning, the 10th) a light was sighted on the starboard bow. The captain, believing this to be the Montauk Point light, to make which he had, as he supposed, shaped his course, at once kept off to the eastward, thus bringing the light on the port bow. Shortly after this, or at about 5 o'clock, the schooner struck bottom, with breakers on every hand. An attempt was instantly made to put canvas on the vessel to work her off, but the sails and rigging being covered with ice, this was found impracticable. She was off the south shore of Nantucket on what is known as Weedweeder Shoal; the light taken for Montauk being in reality the one on Sankaty Head at the eastern end

of the island. The schooner was thus over a hundred miles out of her reckoning. She pounded along the shoal before the wind and sea to the eastward for some distance and finally fetched up, two hundred and fifty yards from the shore, in the vicinity of Little Mioxes Pond, a mile and a half west of the Surfside Life-Saving Station, and there she was shortly afterwards discovered by Surfman Freeman as he returned over his beat from the westward. Keeper Veeder, who had gone up into the lookout on the roof, saw Freeman hurrying along and waving his hands to give the alarm, and a moment later the snow thinned off just long enough to reveal the vessel's masts. Knowing from the bearing that she must be ashore, he hastened down and apprised his men, and by twenty minutes to 8 o'clock, after a hard and fatiguing march against the flying sand and snow driven directly in their faces by the gale, the party arrived abreast of the wreck with the beach-apparatus. The surf resulting from the exceptionally severe gales of the preceding days was extremely high, old surfmen pronouncing it the most dangerous they had seen on that coast for years. There was also a strong set or current to the eastward, alongshore. The ill-fated craft lay broadside to the beach with her head to the east and the seas were sheeting over her in all directions and deluging the deck from one end to the other, the spray at times flying masthead high and freezing wherever it struck. Her crew had for the most part sought refuge below; in fact it was thought when the station crew first arrived and until the people showed themselves, that there was not a soul left on board. Besides the life-saving crew, there quickly congregated upon the scene, regardless of the weather, fully three hundred men, all ready and anxious to aid in rescuing the people from the wreck. The question of launching a boat was eagerly discussed, but the opinion was universal that such a course was impracticable. A boat could not live alongside the schooner a moment, even if it got off. Some of the people on the wreck had taken to the rigging since the crowd commenced to gather, while the rest remained below. Keeper Veeder and his crew promptly commenced operations, and in a few minutes from the time of their arrival had shot a line over the schooner's spanker-boom topping-lift, the bight falling into the arms of one of the men in the mizzen rigging. This man was soon joined by others from below and all taking hold they hauled away until the whip-block was almost within their grasp when, owing to the strong current which bowed the line far to the leeward and made the work very slow and difficult, all but the two men who were originally in the rigging abandoned the task and returned below, the poor fellows appearing to be used up and unable to do anything further. This was doubtless due to their having come direct from the tropics; they could not stand the extreme cold and were almost perished. Upon ceasing their efforts the strain upon the line was found to be so great that they slacked it almost entirely out again. When operations thus came to a stand the life-saving crew walked with both parts of the whip up the shore to the windward so as to be able to slack it, and then motioned to the people on board to haul again on the line. By this method the sailors managed a second time to draw the tail-block almost within reach, when, to the dismay of everybody, the shot-line suddenly snapped in twain from chafing against the rigging, through which it had been led to enable the men to pull on it to greater advantage. This was the first disheartening episode for the station crew. They had, as they thought, the people almost within their saving control, when by the breaking of the line the opportunity was lost and the work had to be done over again. The second shot carried the line to precisely the same place as the first and four men got hold of it and were doing very well, the block having almost

A shot with a small line attached will be fired across your vessel.

Get hold of the line as soon as possible and haul on board until you get a tail-block with a whip or endless line rove through it. This tail-block should be hauled on board as quickly as possible to prevent the whip drifting off with the set or fouling with wreckage, &c. Therefore, if you have been driven into the rigging where but one or two men can work to advantage, cut the shot-line and run it through some available block, such as the throat or peak-halyards block or any block which will afford a clear lead, or even between the ratlines, that as many as possible may assist in hauling.

Attached to the tail-block will be a tally-board, with the following directions in English on one side and French on the other:

"Make the tail of the block fast to the lower mast, well up. If the masts are gone, then to the best place you can find. Cast off shot-line, see that the rope in the block runs free, and show signal to the shore."

The above instructions being complied with, the result will be as shown in Figure 1.

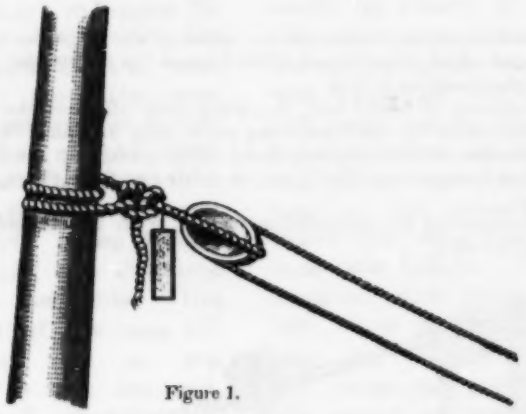


Figure 1.

As soon as your signal is seen a three-inch hawser will be bent onto the whip and hauled off to your ship by the life-saving crew.

If circumstances will admit, you can assist the life-saving crew by manning that part of the whip to which the hawser is bent and hauling with them.

When the end of the hawser is got on board a tally-board will be found attached, bearing the following directions in English on one side and French on the other:

"Make this hawser fast about 2 feet above the tail-block; see all clear, and that the rope in the block runs free, and show signal to the shore."

A set of instructions for rigging the Breeches-Buoy

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reached them, when the shot-line again broke from the same cause as before. One of the sailors, who had been the most active in the effort to haul off the whip and who had hold of the shot-line outside of the rigging when it broke, was by this accident jerked overboard. He maintained his grip on the line for a few moments, but before the life-savers could pull him ashore he let go and disappeared. The breaking of the line twice in succession and the drowning of the very man upon whom depended in a great measure the rigging of the gear was well calculated to increase the anxiety of the throng on

These instructions being obeyed, the result will be as shown in Figure 2.

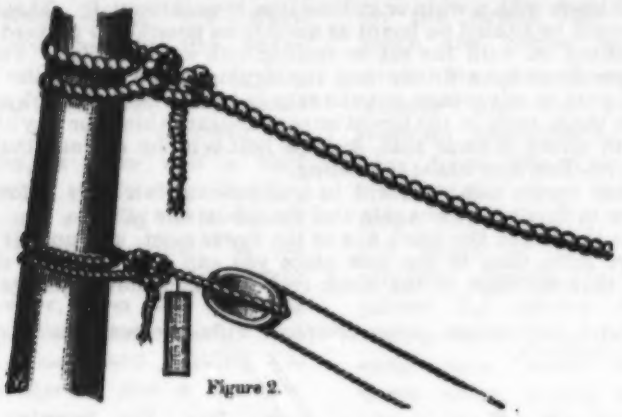

Figure 2.

Take particular care that there are no turns of the whip-line round the hawser, to insure which take the end of the hawser UP BETWEEN *the parts of the whip before making it fast.*

When the hawser is made fast, the whip cast off from the hawser, and your signals seen by the life-saving crew, they will haul the hawser taut and by means of the whip will haul off to your ship the breeches-buoy suspended from a traveller-block, or a life-car from rings, running on the hawser.

Figure 3 represents the apparatus rigged, with the breeches-buoy hauled off to the ship.

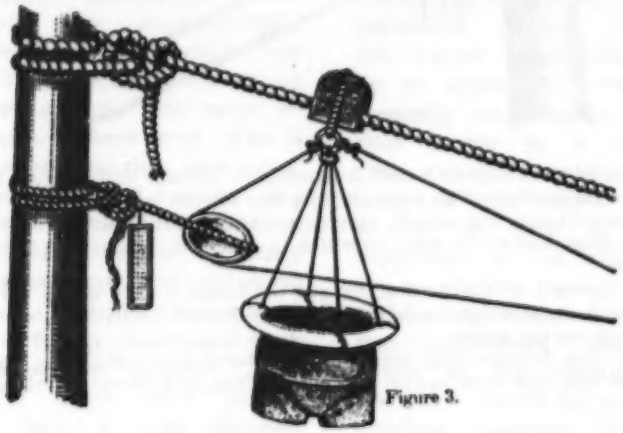

Figure 3.

If the breeches-buoy be sent, let one man immediately get into it, thrusting his legs through the breeches.

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the beach, and they crowded about the station crew with all manner of suggestions, many of them utterly impracticable. It should be mentioned that by this time the surf-boat had been brought down from the station. A life raft belonging to the Massachusetts Humane Society had also arrived, together with a wrecking-boat belonging to the agent of the underwriters, but neither could be used in such a sea. The day had advanced and it was now near noon. Nothing daunted by the previous failures, Keeper Veeder fired a third line to the wreck. It was secured by the only sailor in the rigging able to

do anything, the two near him being motionless and apparently dead. He descended to the deck, passed the line forward outside of the rigging, and after making it fast to the fore rigging, stepped into the forward house and prevailed upon the man he found there to come to his aid. The second man, who it was afterwards learned was the mate, had but a short time previous been seen to emerge from the cabin and rush forward into the house. These two, with such assistance as could be given them from the shore by the surfmen and others walking with the line to windward, as before, and then slacking it into the water, managed to get the breeches-buoy, which Veeder had attached to the bight of the line. But here came another halt; the men upon securing the buoy seemed at a loss what to do with it. They simply made it fast and then stood for sometime watching the shore as though not knowing what to do next. They finally recommended hauling upon the shot-line in an attempt to reach the whip. The latter was drawn a part of the way off when the heavy strain due to the current bowing it far to the leeward, again snapped the small shot-line in two. Another line was thrown by the station crew as quickly as possible, but it lodged over the main-topmast stay, between the masts, some fifty or sixty feet from the deck and too high for them to climb for it. They were evidently unable to do so. Seeing no attempt made to reach it, Keeper Veeder ordered it hauled back. As soon as it could be faked on the the sand it was fired again, but it broke in its flight and the shot was lost. The next time the gun was aimed low, and it lodged the line across the schooner's rail. The same two who had hauled the buoy off, in fact the only living people to be seen on the wreck, now repeated the operation of hauling, and after a hard and tedious task at last succeeded in getting the tail-block and making it fast to the mast. The hawser then followed and the people on shore were breathing freer, thinking that several, if not all, the shipwrecked crew might yet be saved, when a new difficulty arose: the whip, where bent to the hawser, was frozen so stiffly the two men could not cast it adrift. This was necessary to be done before the gear could be operated. The hawser was, however, set taut on shore, and when Keeper Veeder found the sailors could not free the whip, he bent the bight of it to a second breeches-buoy, and, by making signs, succeeded in getting the men to haul it off. It should be stated that in the meantime, at the urgent entreaty of many in the crowd, an effort had been made by means of the shot-line, before the whip was drawn off, and with the aid of oars, to launch the raft, Veeder and some of his men assisting. The raft was barely more than afloat when a tremendous sea broke over it, knocked the oars from the men's grasp, swept two of the rowers into the surf, and drove the raft, like a chip, high and dry upon the beach. The two men narrowly escaped with their lives. But this was not more than Veeder expected. He saw the utter impossibility of getting off when he yielded to the clamor of the crowd to make the attempt. It was after this that the whip and the hawser were sent off. The day was now far spent and it was almost dark. As the crowd watched the movements of the two men in the dim light of the evening, they at last had the satisfaction of seeing one of them, who turned out to be the mate, Burdick Berry, the more badly frost-bitten of the two, get into the buoy. It will be remembered that the bend in the whip had not been cleared. When, therefore, Berry was in readiness his companion hoarsely shouted "haul ashore," and the work of actual rescue began. The sailor, whose name is Charles Wulff, slacked in on the off-shore part of the whip, while those on the beach drew Mr. Berry ashore through the surf. Willing hands at once wrapped the sufferer in blankets, lifted him into a carriage that was in waiting, and he was driven rapidly to the sta-

Fig A.

Fig B.

The Messenger,

Ingersoll Life-Saving Projectile.

"This device will carry a life-line with unerring, certainty over the highest dwelling in New York city. The principle is entirely novel and original. The explosive being confined within the 'Messenger,' to which the line is attached, the friction is thereby reduced to a minimum, thus securing for itself the greatest possible projectile force.

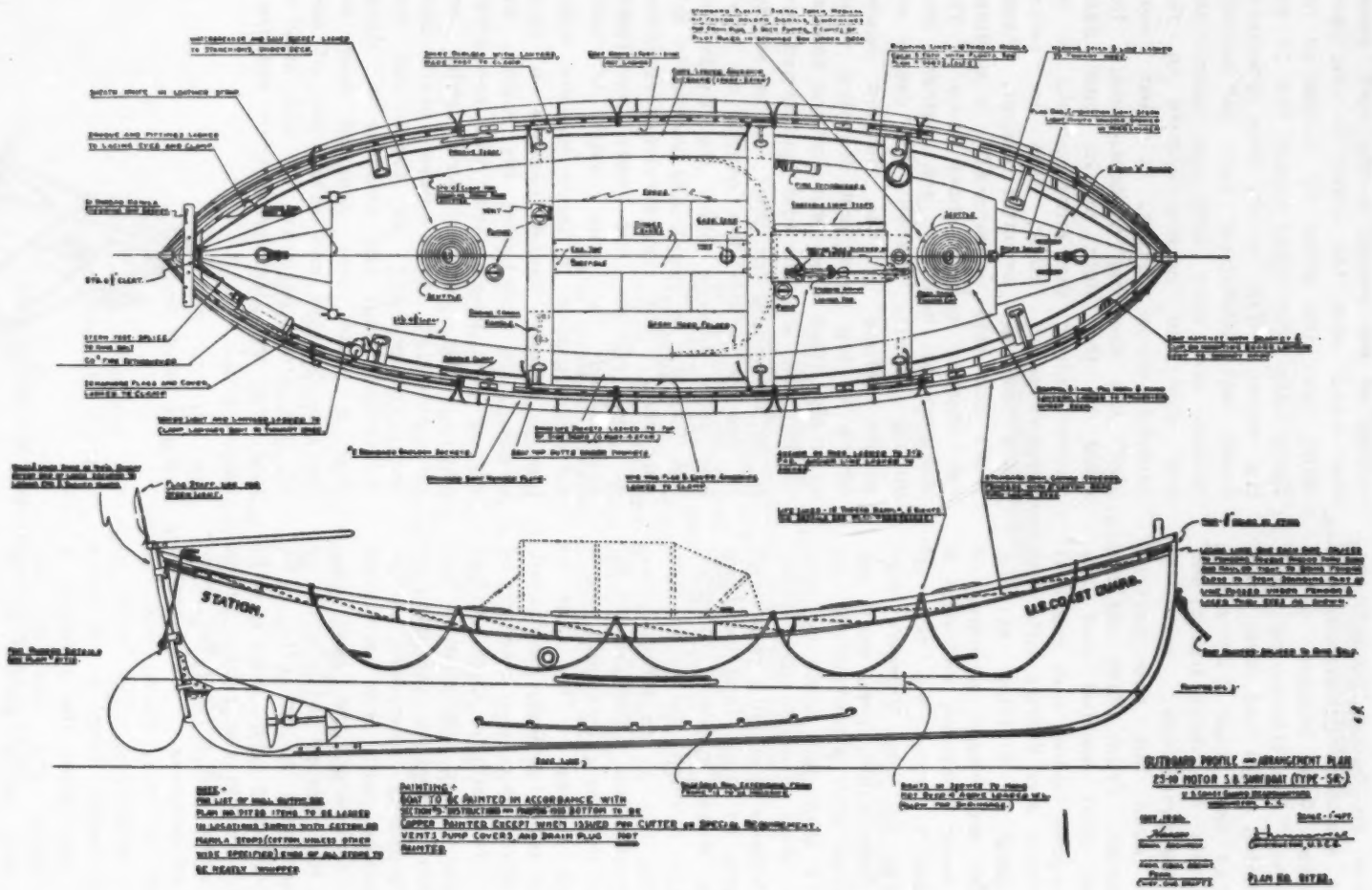
A life-saving line may be thrown at a moment's notice over a burning building, a stranded ship, or to a man overboard struggling for a life which can only be saved by prompt and efficient action.

This appliance being always ready for instantaneous use, assures the needed assistance to lives in peril, whether the weather be fair or boisterous, the sea smooth or rough, and by night or by day, avoiding altogether that delay which is often fatal."

"Address Simon Ingersoll, Glenbrook, Conn."

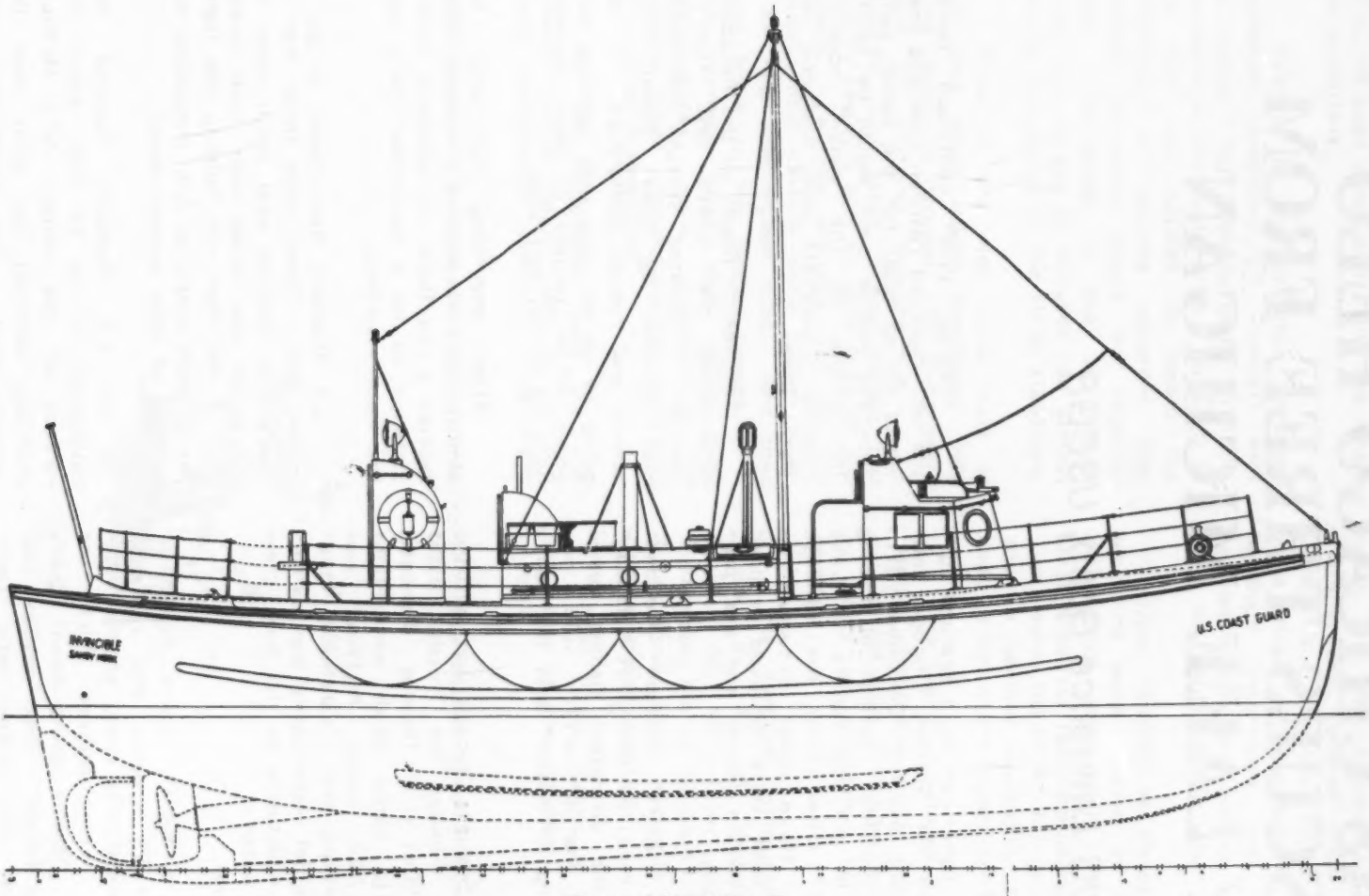
The last word in line-throwing guns - 1886

tion. The other man, meantime, unaided by any one on board, hauled the buoy off again and then getting into it himself, he also was brought safely from the wreck. The life-saving crew and those assisting them had done their bravest and their best since 8 o'clock in the morning under the most trying and discouraging circumstances, and by nightfall had saved but two persons from the schooner. From these two the sad truth was then learned that the others were beyond human aid; the rest of their shipmates and Berry's wife and child were dead. Arriving at the station, the wet and frozen garments of the two men were removed, and with a warm, dry outfit from the box of clothing donated by the Women's National Relief Association, they were put to bed and given such attention as was possible until a physician could be sent for to dress their frost-bitten limbs. As the poor fellows gradually recovered from the effects of their long exposure and from the shock incident to their terrible passage through the surf, they told more fully, but in dejected tones, how their comrades had given up one by one to die on the very threshold, as it were, of their homes. The first to perish was the sailor already mentioned, who fell overboard upon the breaking of the shot-line. Two others, Capt. Alfred H. Anderson and one of the seaman, had frozen to death in rigging, the body of the captain dropping overboard, while the other, coated with ice, remained until it was recovered the next day, when the sea had abated sufficiently to permit the surf-boat to go off. The other four, including the mate's wife and little one, died in the cabin, during the forenoon while the efforts for their rescue were in progress. It is stated that the death of Mrs. Berry and her child was very affecting. The water in the cabin was waist deep; in it were the bodies of two men, the steward, a West-Indian negro, and one of the sailors who had early given up in despair, and in the midst of this scene of horror, with the furniture and debris swashing from side to side with the rolling of the vessel in the surf, stood the mate with his child in one arm while with the other he supported his dying wife who stood beside him in the icy water. The latter, poor creature, could not withstand such a terrible ordeal, and were long she succumbed and died her parting words to her faithful spouse being, "I must leave you!" ere she lost consciousness. The child at the sight of its poor dead mother, clung the more closely to its grief-stricken father, and in terror lisped out the pathetic appeal, "Papa! won't God take us ashore?" It survived the mother but a short time. The disconsolate husband and father, now doubly bereft, rushed on deck and sought refuge in the forward house, where he lay down and doubtless would soon also have died, but for the seaman Wulff, who aroused him and urged him to do something for their mutual safety. It was he whom the people on shore had seen emerge from the cabin and run forward as previously stated in this narrative. The two survivors remained at the station and were hospitably entertained for four days or until sufficiently able to leave for the mainland. Their vessel became a total wreck. In concluding his report, the officer who investigated this sad affair says: "No better work under the circumstances could have been done than Veeder and his crew did that memorable day; and when it is related that a vessel was wrecked near the Surfside Station and seven out of nine of her crew perished, it will also be told that the life-saving crew did their whole duty."



The Type 'SR' 25-ft. 10-in Motor Self-bailing Surfboat

There were 171 of these boats constructed. They were standard equipment at most of our stations 50 years ago.



52' motor Lifeboat (Type F).

1936 — Only two prototype boats were built. The TRIUMPH was placed at Point Adams Station on the Columbia River, and the INVINCIBLE at Station Sandy Hook, NJ. Of wood construction, displacing 30 tons and non-self righting, they were our first attempts at long range lifeboats.

CGAS CHICAGO HELO RESCUES THREE FROM ICY LAKE MICHIGAN

By: LTJG Lawrence Goeb, USCGR

Three fisherman were rescued by a Coast Guard Air Station Chicago helicopter Friday evening December 27th after their 65 foot commercial fishing boat sank in the icy waters of Lake Michigan 17 miles from the Chicago shoreline. Three other crewmen on board the boat were believed trapped inside the sunken vessel and are presumed drowned.

Coast Guard Station Calumet Harbor, IL received the first "Mayday" call from the distressed fishing vessel "Searcher" shortly after 4:00 pm. "We're taking on water!" said the boat's captain.

Air Station Chicago was notified and within minutes the "ready" flight crew of Pilot LT Thomas Blancett, Copilot LTjg Larry Goeb and Flight Mechanic AE2 David McPhaul was airborne enroute the "Searcher's" location. A special water pump was carried to provide assistance to the boat crew in pumping water from the boat.

As the Coast Guard helicopter ("Rescue 1459") crossed the shoreline heading toward the east, another distress call was received from the "Searcher". "We're going down! That's it. Hurry up fellas!" Their position was then radioed. No further radio transmissions were heard.

"Rescue 1459" continued toward the last reported position realizing there would be no need for the water pump. Now the rescue crew would be looking for people in the water, hopefully wearing lifejackets and equipped with signal flares.

The search began as the helicopter approached the boat's last reported position. Updated search information was provided by Coast Guard Group search and rescue authorities. It was going to be no easy task spotting such small visual targets in near darkness with six to ten foot seas.

After searching the area for almost ten minutes, the rescue team spotted a red flare. It appeared from a distance to be a hand-held flare near the water's surface.

LT Blancett flew closer to get a better look. There were three men in lifejackets floating near each other as the rough seas broke over their heads. One of the men was holding the flare. An oil slick could be seen indicating the position of their sunken vessel.

As LT Blancett hovered the helicopter 10 to 15 feet above the surface of the water, AE2 McPhaul skillfully directed the pilot over the pick-up point. The directional commands to the pilot had to be constantly

modified due to the air turbulence, the 25 to 40 knot wind gusts, and the rough sea conditions.

Because of the survivors' apparent weakened condition, LT Blancett sent his copilot LTjg Goeb to assist with the survivors in the cabin area. As each of the men was hoisted on board the helicopter, it became apparent that medical attention would be required soon. Immersion in the 32 degree water for merely 15 minutes had almost totally incapacitated the three survivors.

None of the men could walk or talk and when asked questions, they were unable to respond. All these were signs of extreme hypothermia. LT Blancett said later, "They barely had enough strength left to grab hold of the basket. Within minutes out of the water, their clothes were frozen solid. Their hair was frozen solid. And they even froze to the rescue basket." It was learned later that their body temperatures were approaching 84 degrees (near unconsciousness according to medical authorities).

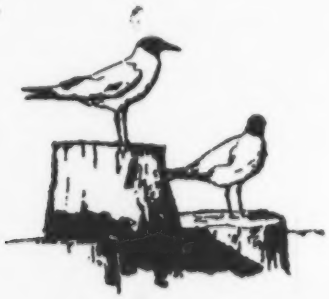
As the helicopter took off and headed toward Meigs Field in Chicago where ambulances awaited, LTjg Goeb and Petty Officer McPhaul removed much of the fishermen's cold, wet clothing and covered them with warm jackets and blankets. Two of the men were near unconsciousness, but one, although incoherent and disoriented, revived quickly and had to be restrained from moving aimlessly about the cabin.

Upon landing at Meigs Field, the survivors were carried to the waiting ambulances and were transported to local hospitals for emergency treatment. Two were listed in fair condition and one in serious condition, due to low body temperature (hypothermia).

The search continued for the three missing fishermen, but was eventually called off the following morning when no signs of additional survivors were found.

The rescued fishermen: Raymond Slupik Jr., 22, of Waukegan, Randy Silvis, 30, of Zion, and Gaetano Terranova, 55, of Chicago were released from local area hospitals within two days in good condition.

The Coast Guard is investigating the cause of the accident.



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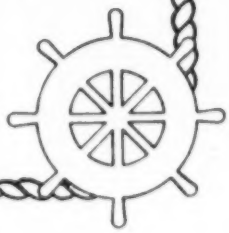
DEADLINE

The deadline for submitting "letters to the editor" to appear in the next issue of ON SCENE is 31 JULY 1986.



ON SCENE welcomes its readers to submit articles of interest pertaining to Search and Rescue (SAR). Articles should be written in "plain English". If submitting photos, we prefer you send 5" X 7" B&W prints or color slides.

"If you submit an article for publication and have typed it on a "C3" it will save us typing time. Type the submission on a floppy disk (5 1/4 or 8 inch) and submit it with a printed copy of the article (double spaced). If requested, we will return the disk when we're done. If available to you, it may be possible to send your article via a phone MODEM. Articles may be submitted to:

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U.S. Coast Guard (G-OSR-2)
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Tel: (202)426-1914

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